

# Desert

THE MAGAZINE OF THE WEST

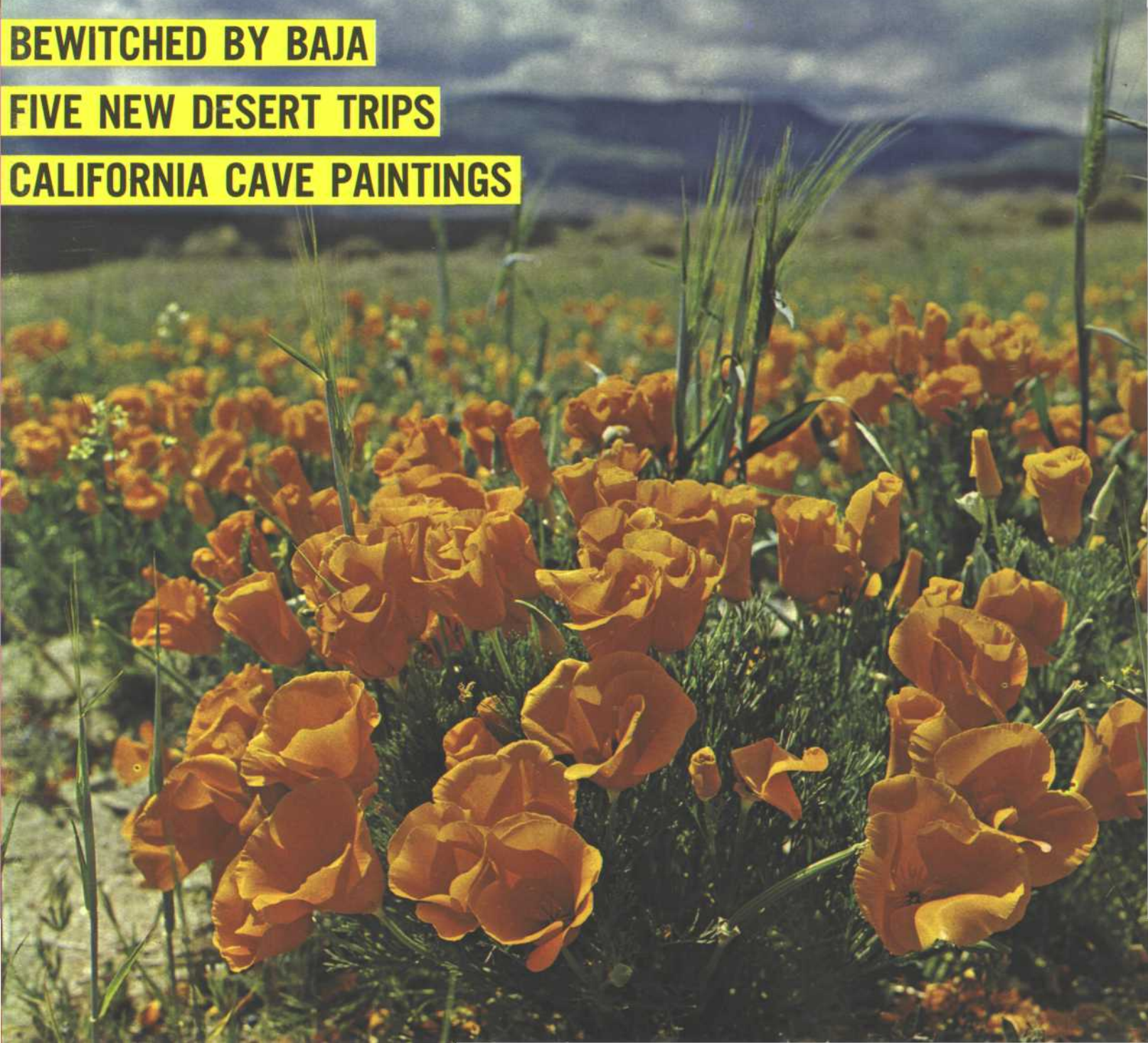
MAY, 1964

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BEWITCHED BY BAJA

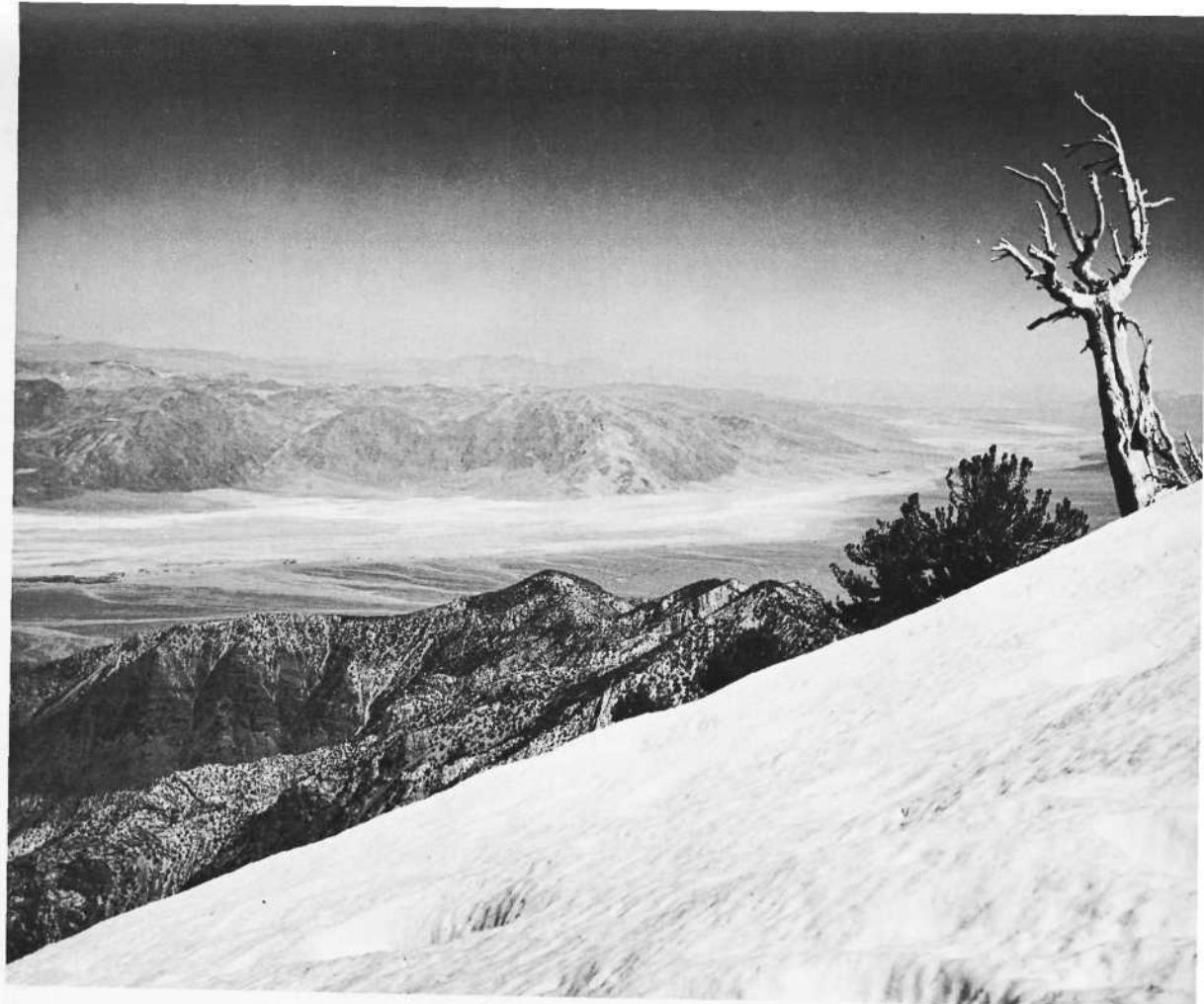
FIVE NEW DESERT TRIPS

CALIFORNIA CAVE PAINTINGS





**MAY  
PHOTO  
CONTEST  
WINNERS**



**First Prize** ▲

**DEATH VALLEY**

**Weldon F. Heald**

Tucson, Arizona

The gleaming white inferno of Death Valley's salt flats is more than two miles below the snowdrifts atop Telescope Peak. Data: Unnamed German camera, Schneider Xenar 135mm lens, f11 at 1/50, Verichrome Pan, Wratten A filter.



◀ **Second Prize**

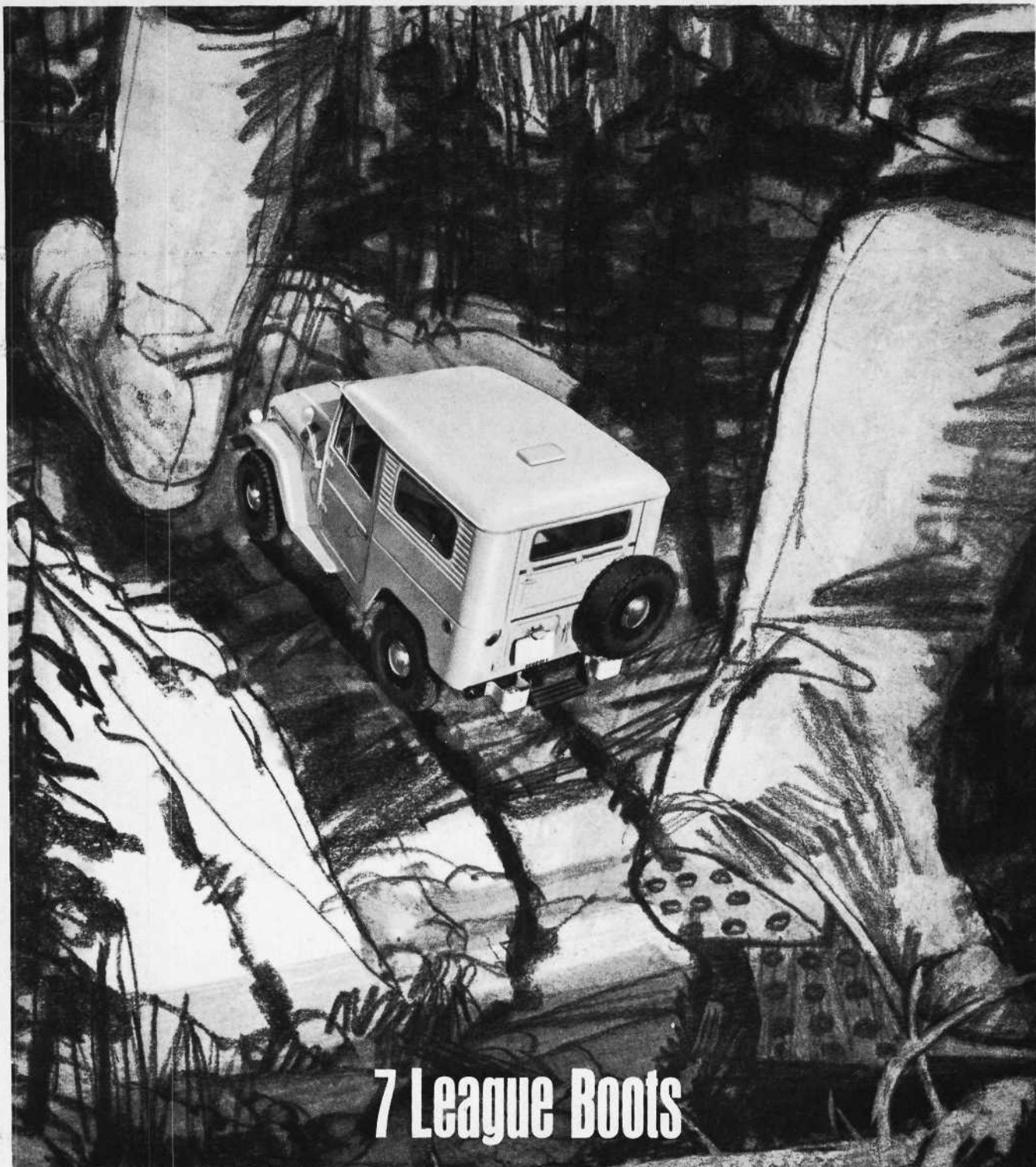
**DESERT STAR**

**T. P. Martin**

Torrance, California

Sun shines through a Joshua tree to form a star near sunset at the Joshua Tree National Monument. Data: Century Graphic, Schneider Xenar lens, f16 at 1/100, Plus-X, red filter.

**See Page 5 for Photo Contest Rules**



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By Louise Price Bell

## Along the old plank road

**M**OTORISTS ROLLING comfortably over U.S. Highway 80 amid the sand dunes west of Yuma have a hard time figuring out how early travelers negotiated the extensive masses of shifting sand. And indeed they might! The solution was bizarre for today's freeway-conditioned minds to understand.

The first attempt to help motorists travel from Yuma, Arizona to California was made in 1912 when a crude plank road was constructed by some California business men hoping to attract Easterners to the West Coast. The road, consisting of 12-inch planks placed parallel and connected with crossboards, was traversed by pulling sections up from under constantly shifting sand and relaying them. No wonder the 60-mile trip from Yuma to El Centro required 12 hectic hours!

Remnants of the old plank road still protude from

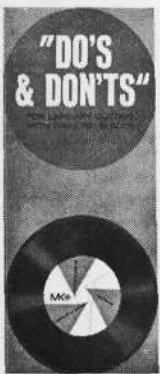
sand along Highway 80, sometimes exposed high on a dune after a recent wind.

When a bridge was built to cross the Colorado River at Yuma in 1915, automobile traffic increased and the plank road had to be replaced. An improved plank road, supported with iron bars, failed to improve the awkward structure, so in 1925 an asphalt-concrete highway was constructed, the same artery over which we drive today.

Careful engineering went into this road. It was built on an embankment over the tops of dunes where increased wind velocity over smooth pavement keeps the road reasonably free of sand. But not always. That is why a careful driver takes his time. Besides, if he doesn't he might miss seeing the mute evidence of what his motoring predecessors contended with when they traveled west. *///*

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## DESERT'S PHOTO CONTEST RULES

(MAY PHOTOS ON INSIDE FRONT COVER)

1—Prints for monthly contests must be black and white, 5x7 or larger, printed on glossy paper.

2—Each photograph submitted should be fully labeled as to subject, time and place. Also technical data: camera, shutter speed, hour of day, etc.

3—PRINTS WILL BE RETURNED ONLY WHEN RETURN POSTAGE IS ENCLOSED.

4—All entries must be in the Desert Magazine office by the 20th of the contest month.

5—Contests are open to both amateur and professional photographers.

6—If space does not allow publication of photographs one month the contest will be resumed during the following months.

7—FIRST PRIZE will be \$15; SECOND PRIZE, \$8. For non-winning pictures accepted for publication \$3 each will be paid. Although not part of the contest, DESERT is also interested in viewing 4x5 color transparencies for possible front cover use. We pay \$25 per transparency.

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JACK PEPPER, *publisher*

CHORAL PEPPER, *editor*

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with a touch of the DESERT

- **LOST DESERT BONANZAS** by Eugene Conrotto, former editor and publisher of Desert Magazine. Known facts about more than 100 lost mines and buried treasures located in the Southwest. Compiled from a quarter-century of Desert Magazine articles. 91 maps. 270 pages. Hard cover and dust-jacket. \$6.50.
- **LOWER CALIFORNIA GUIDE BOOK** by Gerhard and Gulick. Third edition, revised. A "must" for all travelers planning a trip into Baja California. Accurate maps. A mile-by-mile guide with accommodations, supplies, road conditions. Only book of its kind. 24 pages. Hard cover. \$6.50.
- **CRUISING THE SEA OF CORTEZ** by Spencer Murray. A trip by power boat down the Gulf shores of Lower California. List of harbors, shore accommodations, gasoline, water, etc. Maps. Heavily illustrated. First gulf guide book ever. 240 pages. 71 pictures. Hard cover. \$6.50.
- **MOUNTAIN MEADOWS MASSACRE** by Juanita Brooks. Perhaps the most thorough report on the frightful massacre that wiped out a whole wagon train of California-bound emigrants. The book reports on the conditions that surrounded the event, and the long history that finally led to the conviction and execution of one man, John Lee, as the "culprit." 316 pages. Illustrated. Heavily annotated and bibliographed. \$5.95.
- **NAVAJO RUGS—PAST, PRESENT & FUTURE** by Gil Maxwell. A handsome paperback guide about the beautiful Navajo weaving industry. The author is one of the nation's top authorities on Navajo rugs. 72 pages. 20 color plates. Second printing. \$2.
- **DESERT WILDLIFE** by Edmund C. Jaeger. This most-popular of all books about denizens of the desertland is in its third printing. No one can tell the story of the animals and birds of the region as can the authoritative, well-known Dr. Jaeger. Illustrated. 308 pages. Hard cover. \$5.95.
- **INDIAN TRADERS** by Frank McNitt. Contents of this book are thoroughly researched and include chapters on Bent's Fort, Fort Defiance, Hamblin and Lee, Solomon Bibb, Keam, Hubbell, Wingate Valley, Teec-nos-pos, and many other historic posts on the Southwest scene. 394 pages. Epilogue and bibliography. Illustrated. \$5.95.

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## New Books For Desert Readers

### THE SEVEN CITIES OF CIBOLA By Stephen Clissold

The race for the Seven Cities was on! Cortes' conquest of Mexico created the initial excitement. Surely north of Cuba there existed other cities as powerful as Tenochtitlan, ruled by other kings as rich as Montezuma.

Cabeza de Vaca, surviving an eight year odyssey through desert, swamp and mountain festering with savage Indians, reported rich civilizations "somewhere to the north." In response to this, the Spanish Viceroy in Mexico City commissioned an expedition of reconnaissance led by Friar Marcos.

It was Friar Marcos, accompanied by the negro Esteban, whose jubilant report of the discovery of the first of seven cities—Cibola—instituted the large expedition under Coronado which set out early in 1540. However, Friar Marcus was deluded by legends. Coronado found nothing to resemble the seven wealthy cities and Cibola was just another Indian pueblo, in the eyes of explorers who lusted for gold.

With information drawn from a wealth of literature published both in this country and abroad, and with illustrations reproduced from the German engraver Theodore de Bry, among others, this account of Spanish expeditions to Florida and Cibola is outstanding in reference material as well as being highly readable.

**THE SEVEN CITIES OF CIBOLA**, published by Clarkson N. Potter, Inc., New York, is a hard cover book of 191 pages. Price, \$4.75.

### PUEBLO GODS AND MYTHS By Hamilton A. Tyler

In this book the author draws interesting analogies between Greek and other mythological gods, not to show that one developed from the other, but to better explain the development and intention of Pueblo mythology. Then, like constructing the House that Jack Built, he goes on to illustrate associated ideas which gave birth to the gods.

For instance, the ability of an animal to become a god, in Pueblo mythology, is dependent upon the number of ideas it can stand for. The serpent is particularly potent because it embodies power, cunning and venom, in addition to having recourse to the

underworld where the dead live. As a communicator between upper and lower worlds, it is also active in processes of fertility and sowing the soil and, because agriculture involves weather control, it is further associated with the elements.

Author Tyler relates Pueblo customs that give the reader an unusual insight into these wonderful people. He tells of an incident wherein an Indian hunter drew the face of a partially expired rabbit up to his own and breathed from its nostrils its last faint breath. Although the rabbit is not a mighty symbol like the lion and identification would not endow the hunter with great strength, to a Pueblo Indian even the most lowly victim of a commonplace hunt has a power worth preserving and incorporating into one's self.

With his approach—what is all the dancing about?—Tyler has come up with a first-rate "think" book. After carrying the concept of animism through Freudian and Buber explanations, he leaves the reader with both the information and inclination to arrive at a conclusion of his own. One point he makes clear; Pueblo religion is not simple, nor is it a survival of an arrested civilization. It is but one response to the same baffling problems which have beset everyone who thinks, no matter in what age he lives.

Published by the University of Oklahoma Press, **PUEBLO GODS AND MYTHS** is a hardcover, 313 page book. Price \$5.95.

### VEGETATION AND FLORA OF OF THE SONORAN DESERT

By Forrest Shreve and Ira L. Wiggins

For the first time the plants of the desert regions of Mexico are treated in detail; new species, subspecies, and varieties are described; new combinations are given; and new records of distribution with a fine map locate hitherto unknown occurrences; and the records of the flowering periods are given.

In two volumes, its 1740 pages comprise the results of more than 30 years of botanical research on the Sonoran desert, an area including parts of California, Arizona, the Mexican state of Sonora and most of Baja California.

Mr. Shreve, a research staff member of the Carnegie Institution's Desert



## By Choral Pepper

Laboratory, and Mr. Wiggins, Professor of Biology at Stanford University, have compiled a monumental technical legacy for students of desert flora.

Published by the Stanford University Press, Stanford, California, the price, \$22.50, includes both volumes.

## THE PAST IN GLASS

By Pat and Bob Ferraro

As the authors warn, "It only takes one bottle to develop the habit!"

Bottle collectors, a new breed of Western hobbyist, keep reaching for information, but it's hard to find. Books in the field have a hard time keeping pace with the collectors. The authors of *THE PAST IN GLASS*, a 96-page paperback, recognize the fact that until collectors realize the importance of cataloguing bottles—as there are thousands of different ones—many questions plaguing bottle-diggers will go unanswered.

The bottles discussed in this book, along with chapters on the composition and history of glass and facts about dating, include those that once contained beverages, foods, inks, mucilages, cosmetics and drugs currently accessible to all collectors, rather than those of great rarity.

As interesting as the bottles to most collectors are the revelations they proclaim. The Ferraros observe that oral hygiene did not have the prominence in gold rush days that it has now, as only two brands of pottery toothpaste containers are unearthed in any abundance, and even those are demoralizingly rare.

Line drawings of 210 bottles by Penny Kruger contribute to the lively text. *PAST IN GLASS* may be ordered from: 465 15th Street, Lovelock, Nevada. Price \$3.00.

### Books By

## Erle Stanley Gardner

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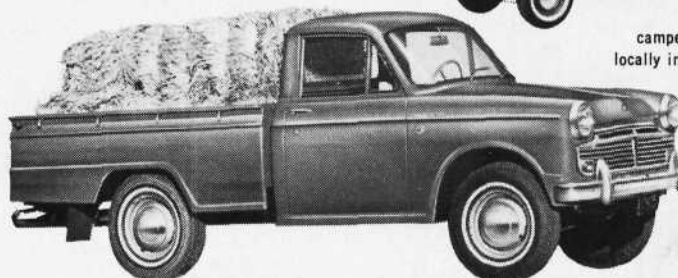
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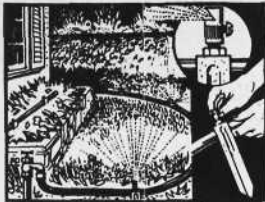
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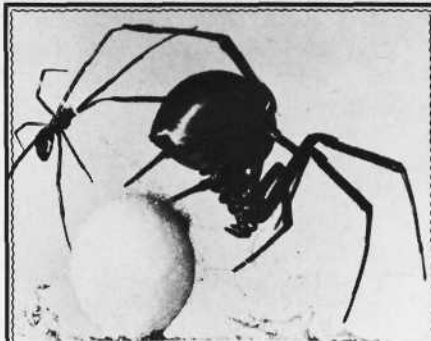
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## The UNMERRY Widow

By

Marguerite Smelser

CALIFORNIA HAS her full share of black widow spiders, yet few persons are bitten. The widow is that jet black gal with a red hourglass on her underside. Like most spiders, she is shy and retiring and will make every effort to escape even when molested. Rarely does she bite, and still more rarely is her bite fatal, except when complicated by alcoholism, syphilis or faulty treatment.

The U. S. Public Health Service in 1939 reported finding 174 black widows on a ship at Miami. The ship was heavily infested with cockroaches on which the spiders flourished. No cases of spider bites were reported.

Black widows frequent dark places. A successful method of extermination is to entangle them in the meshes of a broom and then use a wooden paddle to finish the job.

The widow and her web are distinctive and easily identified. Children should be taught to recognize both. The widow's web has no regular pattern, but is a fairly dense criss-cross of silk strong enough to hold a small twig or pencil. Viewing such beauty, the famous Fabre exclaimed: "What a refinement of Art to catch a mess of flies!"

If you are bitten by a black widow don't panic. Call your doctor, take a hot bath, stay away from booze, and by all means, hang on to your time-piece.

On record is the farmer, back in the '80s, who was bitten by a black widow spider. He prepared to die. He wrote his Will, he sent for his neighbors to bid them goodbye—and he gave his prized watch to his best friend. How foolish the farmer must have felt when he recovered!

I've always wondered: did he get back his watch?  
///

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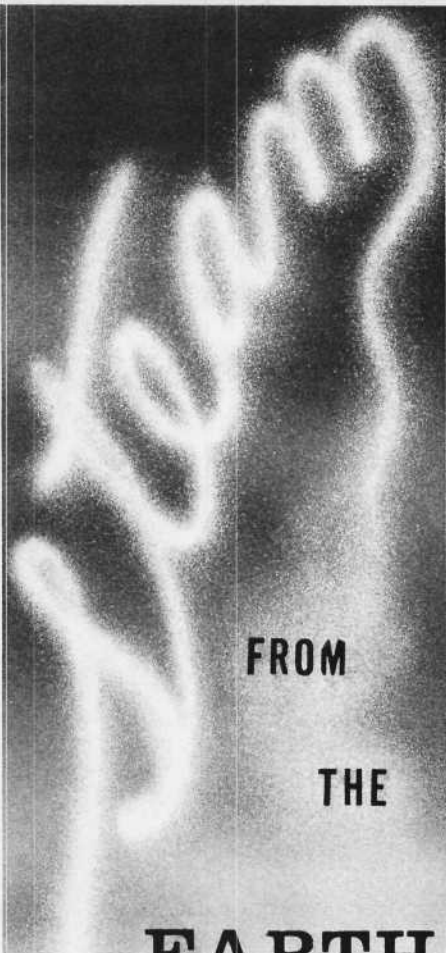
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# FROM THE EARTH

by  
VOLLIE TRIPP

EVERYONE KNOWS about the Colorado Desert, wasteland turned into a garden by the magic touch of water, with products going to the ends of the world. Now the desert is about to yield another wealth form, very different from her familiar ones. Natural, or geothermic steam!

Steam to turn electric generators, for cheap power. Steam to yield useful minerals and chemicals, later perhaps to be condensed back into pure water. Steam for heat, possibly for cooking and processing foods, of which the desert country yields such rich variety.

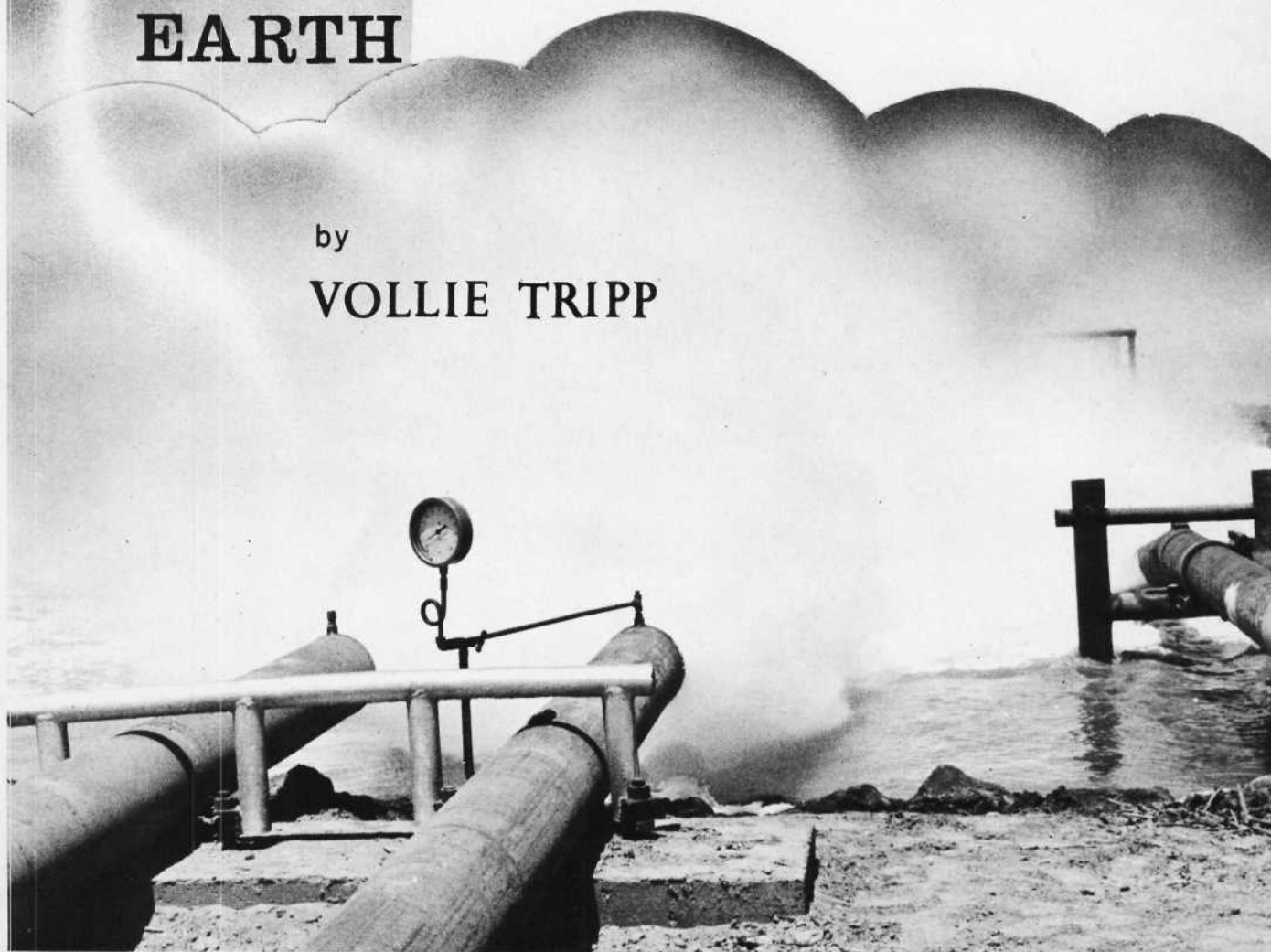
The story of man's attempts to locate and put to use the vast reservoirs of earth energy, in the form of heat, and steam, goes back a long time. In 1904, Italian engineers piped live steam from the earth to an engine, and ran a small dynamo. Since then, many countries have developed thermal steam plants, notably New Zealand, Iceland, Peru, Japan, Mexico. Italy has greatly expanded use of such energy, and the Russians are believed to have such plants.

In 1961, the first natural steam plant in the United States was placed in operation, at The Geysers, Sonoma

County, above San Francisco. The area was discovered in 1847 by a hunter, as he pursued a wounded bear, up Big Sulphur Canyon. After the Civil War, a resort and mud baths were featured here and many noted persons visited the area.

When the writer visited The Geysers in 1961, the plant was turning out some 13,000 K.W.'s of energy. An engineer informed us he believed the potential as great as all power produced by Hoover Dam. Now a second plant has been put into operation at The Geysers, and energy output doubled.

The Carnegie endowed Geophysical Institute very early recognized the potential of sub-terranean steam for power. In the early '20s the Institute employed Butler & Son, well drillers of Alpine, California, to drill a number of exploratory wells in The Geysers area. Live steam was found in all of the six or seven test wells drilled by Butler, who used the steam to run a small engine in the drilling. Later he installed a turbine, with vanes of many different metals, to test and determine what metals were most resistant to the chemicals or minerals believed present in the steam.



Considerable difference of opinion exists concerning the "mechanics" of steam production in the vast earth boiler beneath our feet. All agree, however, that the interior, indeed, just beneath a relatively thin rock skin, very high temperatures prevail. Water admitted into this area turns to steam, which finds escape from vents or fumaroles. Such places as the Norris Basin, in Yellowstone National

Park, in Lassen National Park, in Mammoth, northern California, in places in Nevada and elsewhere, such fumaroles exist, and drilling in or near them almost always results in live steam. The presence of hot water suggests that steam can be found in many other areas by drilling to a greater depth.

Water may reach the white hot magma from seepage from the surface. If this is the case, it must seep or flow through beds or strata containing a high charge of minerals or chemicals, since such steam, in most cases, carries one or more minerals, usually salts. But here we come to a problem. In ordinary evaporation all of the minerals are left behind with only the steam passing over. Perhaps the minerals are held in the "wet steam," actually droplets of water, imperfectly, or incompletely vaporized.

In connection with the "boiler concept," another theory (mine) may be worth noting. The interior of the earth holds large amounts of water called "juvenile waters" which have never been on the surface. The waters at Hot Springs, Arkansas, are said to be of this kind. Long in contact with interior minerals, they absorb them to a point of saturation. These waters are heated to a degree very nearly as high as the molten rock containing them. Being tightly confined, they remain liquid. At a point of release, as in a well, the water instantly turns into steam and shoots to the surface.

Steam is presently within reach of present day drilling methods over a wide area, and the minerals in the brine are important. Sodium chloride, common salt, is plentiful. Other minerals are potassium chloride, (muriate of potash) and calcium chloride.

In a telephone conversation with an officer of the Shell Oil Company, interested in a well near Niland at

the south end of Salton Sea, we were told the value of recovered minerals from the Imperial Valley developments might very well exceed the value of its steam as a power source. Some Imperial Valley residents believe that solids recovered from this steam may form the basis for an important chemical industry.

Some 5 miles east of the old mining town of Randsburg a well producing live steam was very active some 10 years back. This well had apparently been drilled in hope of finding water. A crude steam bath house was erected near the steam bore and occasional desert characters took advantage of the free facilities. Steam, and possibly minerals, could almost certainly be found by drilling at this site.

Those of us who prefer fewer rather than more commercial establishments in the desert cannot look upon the new development without a tinge of regret. On the other hand, the search for more and cheaper energy will no doubt go on. Certain it is that power from natural steam is greatly to be preferred to that from combustion, with its pollution of the atmosphere. Steam from the magma is clean and, once admitted to the turbines, almost totally silent. Such plants are not only cheaper than those using nuclear energy, but they pose no threat to the public such as that associated with the splitting of the atom.

Only one thing bothers the author. As heat from the earth is sapped away, will our old ball get colder and colder, shrink smaller and smaller, until, in the end, it will be no bigger than a good sized balloon? This could be serious, with population growing as it is.

But whether or not, one thing seems sure. We of the desert will be hearing much more in the future about steam. ///

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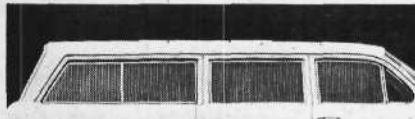
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By Helen Gilbert

## Desert's

trip of the  
month

# Ramona's Country Today

PAST AND PRESENT go hand in hand in the Indian country today. The mellow tones of a mission bell ring out on the warm spring air. It seems a strange place for a mission bell, mounted on a ranch building. It is calling workmen to dinner. A truck roars through the gate and ranch-hands disappear into the cook house.

This is the old Pauba ranch or "little Temecula," as it is known to local residents. Once a cross-roads store, it is now owned by the Vail Cattle Company. A bronze plaque on an old adobe building used today to store grain proclaims that here the Treaty of Peace and Friendship was

signed between the United States and the Indians.

To reach "Indian country" we leave Highway 395 where it bypasses the town of Temecula, turning east on Highway 71 toward Little Temecula, formerly a *rancheria* for Mission San Luis Rey. It was in this fertile Valley of Temecula that Helen Hunt Jackson saw the empty houses from which the Indians had been evicted and was so impressed that she wrote the novel *Ramona*.

Although the story is fiction, it contains many true facts. It was a Ca-

huilla Indian woman, Ramona Lubo, whose husband was shot and killed by a white man as depicted in the story. And although Mrs. Jackson wove into the fabric of her story incidents pertaining to several living persons, the tragic death of Ramona's husband, Juan Diego, became the most dramatic episode of the novel. This hill country of Riverside County was the locale for the story.

A side trip of two miles on the Pala road (S 16) brings us to Pechanga reservation where the Indians settled after they were evicted from Temecula. Here the canyon flattens out onto a wide valley dotted with live oaks. Layer after layer of hills stretch toward Pala mountain. In this valley, hedged by sage-covered hills, are homes of a dozen or so Indians still living at Pechanga. The air is warm and sweet with sage, fresh flowers mark the graves in the churchyard, and the songs of bluebirds and mea-



**HISTORIC PHOTO OF RAMONA LUBO AND HER SON, CONDINO, TAKEN NEAR CAHUILLA.**



dowlarks express the peace that has descended on Pechanga.

Highway 71 follows the old Emigrant Trail through rolling hill-country little changed in the eighty years since *Ramona* was written, but contrasts appear in the way of life of the people. At the cross-roads settlement of Aguanga, a roadside cafe is the gathering place for ranch-hands from the nearby W Circle W Ranch and for settlers from over the valley. A young Indian and his wife climb into a shining new pick-up and roar off toward the reservation.

Tony Christino, a long-time resident, pointed out the Jacob Bergman home built in 1870. "Bergman maintained a Butterfield Stage depot, frequently referred to as The Dutchman's," Tony explains.

A short distance beyond Aguanga,

Harry Bergman, grandson of the pioneer, maintains an outstanding museum of pioneer relics and Indian artifacts, including baskets beautifully made by Ramona Lubo.

"It was my grandfather who went up and brought Juan Diego down after he was killed," Harry Bergman informed us. "They lived on a little flat high on the west side of Little Cahuilla mountain. The place is now designated on Forest Service maps as Juan Diego Flat.

"I knew Ramona's son, Condino Hopkins, named for his foster father, and went to school with him," Berg-

man continued. "His house was across from the cemetery on a shelf of Cahuilla Creek. Several years before his death, Condino moved to Coachella near the ancestral home of the Cahuilla tribe, an area bordering the ancient fresh water Lake Cahuilla, now the popular Salton Sea."

Continuing east, our road cuts through dense thickets of Mangalar and Ribbonwood and brings us to Cahuilla valley with its miles of open land and granite boulders. Here we see and talk with descendants of the Indians and pioneers who lived the story of Ramona.

My friend, Clinton Smith, remembers, "I talked with Ramona Lubo many times. I bought her baskets and knew her tall, stalwart son, Condino."

Pointing to a photo of the aged Ramona sitting beside a makeshift shelter, he explains, "The women loved to come to this rocky place near the cemetery to grind their acorns on *morteros* to make *beyote*."

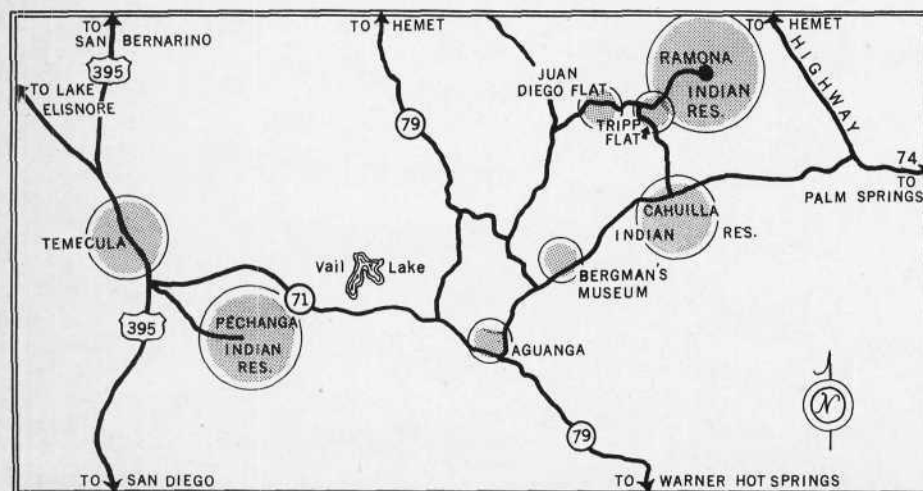
While visiting the old burying-ground located on a boulder-strewn point overlooking the valley, we learn that granite markers have been placed on both the graves of Ramona and Juan. Other graves are marked by simple wooden crosses.

Probably not more than 50 Cahuillas live on the reservation at the present time. Herds of cattle graze in the valley along Durasno Creek. Again we are aware of a mixture of past and present. Some fields are irrigated by modern overhead sprinkling systems while, in the privacy of the tribal watering place, a small child bathes and women launder clothes in the manner of the ancients.

The spot where Ramona lived is reached by following a graded road from Cahuilla about four miles north to the old Tripp homestead. From here a narrow road climbs the eastern slope to the saddle of Cahuilla Mountain. Over the ridge is a draw where a cross painted on stone marks the place where Juan Diego was killed. All traces of the adobe home are gone, however.

From the chaparral comes a whirr of wings and the gentle call of the mourning-dove. Remember how Alessandro had called his beloved "Majella?"

Shadows deepen early on the mountain. With reluctance, we leave this quiet valley, a warm feeling in our hearts for our Indian neighbors and for this section of the Southwest. To us, it will always be Ramona's country. ///





Invited by Erle Stanley Gardner to accompany his expedition on a Baja adventure, the writer spent eight exciting days exploring Baja California by land and air. Because of DESERT's deadlines, Publisher Jack Pepper had to miss the first four days, but flew to Mulege on a regular Baja Airline flight to join the Gardner party later.

Some nights we camped on a tropical beach, others we slept in exotic hotels. One memorable night was passed under the shelter of a farmyard grass shack. We watched whales spout at Scammon's Lagoon and vultures suck eyes from dead tortuava at El Coyote. We witnessed new horns growing from a goat with a soldered skull and made friends with a lady's pet pig. We ate turtle steak, beer pancakes, and, once, lobster for three meals in a row.

But best of all, we learned that a trip such as this may be duplicated at nominal cost. Everyone hasn't the time to travel the rough roads of Baja by auto or mule. Erle Stanley Gardner, who has traveled it in every conceivable way for 15 years, showed us how to get the most out of Baja in one week. This is the first of a series in which we will share the experience with DESERT readers.



## BEWITCHED BY BAJA

By Choral Pepper, Editor DESERT Magazine

OUR TRIP BEGAN on a Sunday morning in a storm. "Everytime Gardner heads for Baja, it rains," Erle grumbled. "All they have to do to survive a drought down here is wait until I have time to gather material for another Baja book. They don't send for rain gods anymore. They wait for Gardner."

A caravan of trucks carrying equipment and supplies to set up camp at Conception Bay below Mulege had left in advance, planning to rendezvous with us en route at one of the primitive airstrips where our chartered plane could land. We weren't too concerned at the prospect of delay for foul weather, however, as Sam Hicks, leader of the caravan, had been instructed to

disregard our anticipated schedule if we didn't materialize and let us find him. Without wasting time waiting for each other, that's the only way travelers can effect meetings in this land of limited communications.

Nevertheless, we were impatient to get underway. Mr. Gardner—"Uncle Erle" to us—had been prevented from accompanying his land caravan because of a TV commitment and my time away from DESERT was limited to a week. Jean Bethell, Gardner's executive secretary, and Capitan Francisco Munoz, president of Baja Airlines, peered hopefully into the black clouds from the Tijuana airport door.

"Look, look," Munoz made binoculars of his hands.



WAITING OUT THE STORM, ERLE STANLEY GARDNER TAKES REFUGE AT THE SANTA MARIA SKY RANCH. NOTE THE CLAM SHELL TILE ROOF OF RANCH COTTAGES.



STORMY COASTLINE NEAR SANTA MARIA IN BAJA CALIFORNIA.

JEAN BETHELL, PERSONIFICATION OF PERRY MASON'S FAMOUS SECRETARY DELLA STREET, WAS THE FIRST (AND PERHAPS ONLY) WOMAN TO DRIVE A JEEP THE ENTIRE LENGTH OF THE PENINSULA.



"There's a break in the cloud. We go up. It is nothing!" he shrugged.

"Eet ees nothing!" Erle mimicked. "How often I've heard that from you! Remember the time we made an emergency landing in the mud because we couldn't make it through a storm to Tijuana? Remember the time you and Sam Hicks together weren't strong enough to budge a frozen rudder? Remember the time . . ."

"This is not like that. It is nothing," Munoz laughed and herded us to the single engine Cessna 195 that Erle had chartered.

"Do you know anything about flying, Choral?" Erle asked.

"I soloed once," I admitted, neglecting to add that my skittish landing left the instructor watching from the ground so shaken that he refused to participate further in my flying career.

"Good, then you're the co-pilot," Capitan Munoz announced, directing me to the seat beside his own.

"Promise me one thing, Francisco," Erle insisted. "You do not fly into any clouds.."

"No, no," Munoz agreed (I noticed that Mexicans say 'no' when they agree). "We do not fly into the clouds. See? We poosh the clouds away." His expressive hands 'pooshed' and, sure enough, a cloud moved aside. We shot into the exposed blue patch, but that was the last one we ever saw. And we pooshed and pooshed and pooshed . . . all four of us.

For a period we could still see a shoreline—flying barely 300 feet above ground—and then it disappeared. Munoz would like to have topped the clouds, but Erle held him to his promise to fly within sight of the ground, in the event ground should reappear.

I don't know if Jean was alarmed, but Erle with his over-active imagination carried on enough for them both. I, however, remained unperturbed. Not because of steel nerves and magnificent courage, but because of my seat beside the pilot. Limited as my piloting experience is, it's advanced enough to recognize genius. I'd fly calmly through a monsoon with Munoz—and in the years Gardner's been flying with Munoz, he probably already has, although not calmly. Our Uncle Erle wouldn't have any fun if he did things calmly.

During the war Munoz was assigned special duty as an instructor in the art of negotiating difficult landings—a technique he perfected during his days as a "lobster pilot." As far as flying experience is concerned, that of a bug pilot, as they are called, beats all other. No matter what the weather, fresh lobster has to reach its market alive and most primitive fishing camps where bug pilots pick up cargo don't maintain airports. These pilots learn to land in any kind of wind, fly over any kind of terrain, and impossible landings are routine. Now that Munoz is president of Baja Airlines with a fleet of planes making regularly scheduled flights to various points in Baja, however, he flies passengers instead of lobsters and only lands at established fields. But when Gardner charts a plane for adventure it's different. Then Munoz treats his old friend Gardner like a lobster.

Nevertheless, it requires more than stiff training to produce a flyer like Munoz. He was born to fly. He pilots a plane as instinctively as an Indian tracks game. From the feel of his plane he can detect the velocity and direction of wind and with his knowledge of the country, he can fly blind. If Munoz takes what to a





THE AUTHOR, WHO FOR EIGHT WONDERFUL DAYS LIVED IN A WARDROBE OF DENIM JEANS, IS NOW ONE OF THE GREAT NUMBER OF ANGLO-AMERICANS ADDICTED TO BAJA.

lesser pilot might be considered risk, it is not a risk to him. He never takes risks. He knows exactly what he can do, what his plane can do, and what the sky above and the land below will do. In a plane Munoz knows everything, except how to "poosh" the clouds away. That he does not know. So we landed on the narrow muddy airstrip of Santa Maria Sky Ranch—the most exquisite 3-point landing I've ever witnessed!

Managed by Senora Irma de Hernandez, a beautiful young widow, Santa Maria Sky Ranch is a fishing resort located about 188 miles south of Tijuana. In fair weather, passenger cars can reach it without any trouble. The first 120 miles are hard surface and the remainder gravel. Motorists who fish, collect shells, or camp on uncrowded beaches and haven't time to travel further south of the border don't do much talking about this place because they want to keep it to themselves. This I can understand. We had lobster tortillas for lunch, fresh lobsters in the shell for dinner and lobster *huevos* for breakfast the next morning. If the rain hadn't ceased, I'd be there eating lobster yet. And I can hardly wait to return.

Overnight accommodation in the pink bungalows with their clam shell tiled roofs are far from luxurious, but some units have baths and they are clean. Heat is furnished with unvented gas heaters, which can be dangerous if left burning all night. However, heat in this country is rarely necessary. The Senora permits trailers and campers on the ranch property. We visited with two Marine officers living in a camper who had been fishing for a month and taking many of their meals at the ranch. Three resorts nearby are scheduled for an early opening (at least one other with a landing strip) and it is expected that the hard surfaced road from Ensenada will be extended within a year or so.

After the rain stopped Jean and I walked up the

road to look over the land. It was still too foggy to see the sea. The earth smelled good, the air salty and slumped forms of newly made adobe looked like ruins from an ancient fort. We talked about the painted caves Jean had explored on previous Gardner expeditions and worked ourselves into a dither of excitement anticipating this one.

DESERT readers familiar with Gardner's Baja books are already acquainted with Jean Bethell. Pretty, petite and competent, without the brittle officiousness of many women in an executive position, her personality contributes as much to Gardner's Baja missions as it does to the characterization of her Perry Mason counterpart, Della Street. Jean is an experienced hostess when a hostess is needed and an indefatigable note-taker when Gardner's gathering information. With sleep or without sleep, with civilization or without it, with a hairdresser or without one, Jeanie remains perfectly groomed and good-natured. There aren't many women in the world like her, especially in the back-country of Baja. In addition to these attributes, she is endowed with two sisters who are also Gardner secretaries and who were maintaining order in his office back home while we wandered country lanes sniffing the pungent atmosphere of Baja.

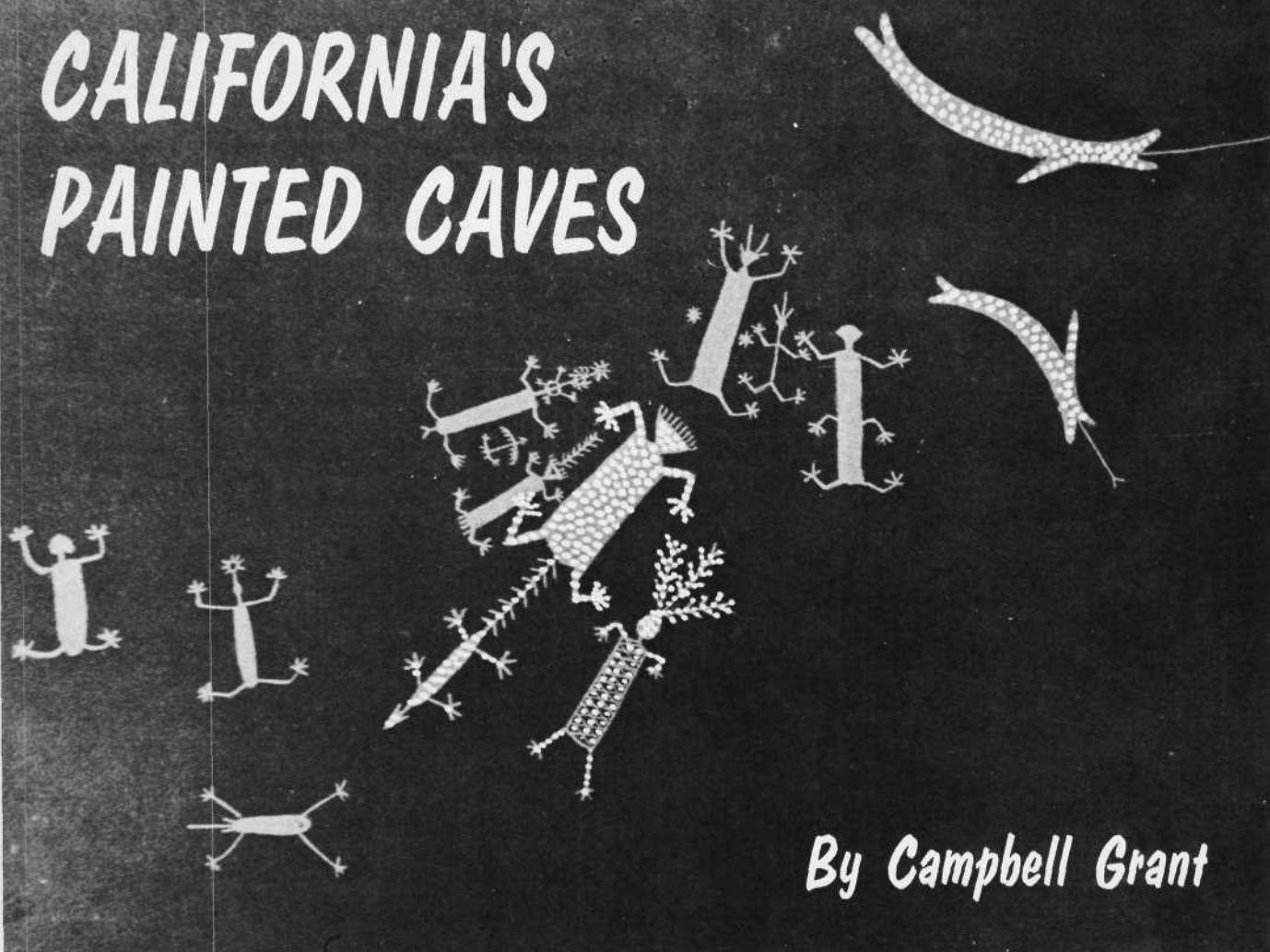
When we returned to the ranch it was cocktail time. We all tried a Margarita (1½ oz. tequila, ½ oz. triple sec, juice of ½ lemon, stir with crushed ice; rub lemon peel around rim of 3 oz. cocktail glass and dip rim in salt). This experiment was such a smashing success that we ordered another to enjoy around the hearthside fire while a pat-pat of tortillas resounded from the *cocina* and a plump cook set our table.

After dinner we visited with Senora Hernandez' well-behaved son. His name is Jose, he is eight years old, and he flies to school—one of the paradoxes of this curious country. Some *rancherias* are without electricity. Plumbing is unheard of. Clothes are laundered in streams and dried on a bush. Burros are the popular mode of land transportation. Yet the children of Santa Maria board a plane daily to fly to school!

Next month we will tell about building an airport near El Coyote, establishing camp at Conception Bay, examining mountains of petroglyphs, and getting acquainted with the wonderful people of Baja.



# CALIFORNIA'S PAINTED CAVES



*By Campbell Grant*

THE AQUATIC FIGURES AT THE TOP ARE FOUND IN ALL PARTS OF THE SANTA BARBARA REGION. THESE ARE THE ONLY ONES WITH TONGUES AND SOMETIMES THEY LACK THE FIN, BUT THE SYMBOL HAD WIDESPREAD SIGNIFICANCE

*Campbell Grant, associate of the Santa Barbara Museum of Natural History, has prepared the following article at DESERT's request. Mr. Grant is currently occupied with the final draft of a book on California pictographs which will be published soon.*

THERE ARE MANY books available on the cave paintings in

Europe and in recent years the study of this interesting art form has included other parts of the world, notably Africa and Australia. It is surprising with such widespread interest in the subject, that the rock art of our own country has been so long neglected—less than half a dozen books have been written on the subject since the first publication in 1886.

Rock art is divided into two main types: pictograph or rock paintings and petroglyphs, incised or pecked rocks. A few petroglyphs, such as the curiously carved Dighton Rock in Massachusetts, have been known since

the 1600's, but it was not until the migration of gold seekers to California that the great concentrations of rock art from the Rockies to the Pacific were first noted. J. R. Bruff, hurrying through the Sierra-Nevadas to the gold camps in 1850, saw many petroglyphs and that same year one of the Mexican border commissioners recorded the Huaco Tanks paintings in southwest Texas. The first record of cave paintings in California was of the Painted Cave near Santa Barbara, made by the Reverend Stephen Bowers in the early 1870's.

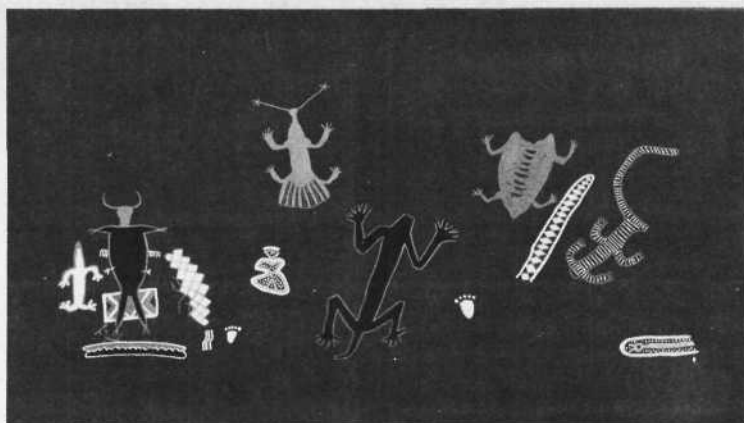
In 1929, J. T. Steward published his *Petroglyphs of California and Ad-*

*joining States*, the first systematic study on American rock art. From that time until the present, enough field work has been done so that the general pattern of sites west of the Mississippi can be seen. Though there is a scattering of rock paintings throughout the western states, there are only two major concentrations of this art form. One is in southwest Texas, with the greatest density near the junction of the Pecos and Rio Grande Rivers, and the other is in California south of San Francisco, with the bulk of the paintings in the mountainous Santa Barbara area and in the Kern-Tulare region of the Sierra-Nevada foothills.

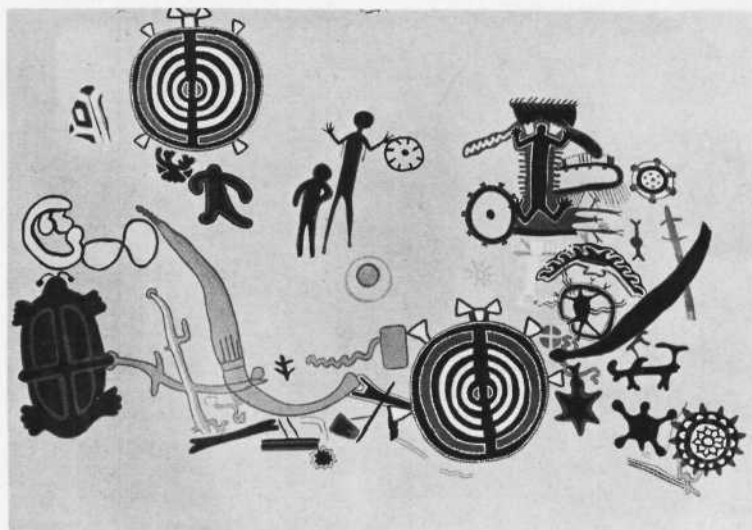


In outlining the Santa Barbara area, I have arbitrarily taken the boundaries established by A. L. Kroeber (*Handbook of the Indians of California*, 1925) for the Chumash speaking people. This includes all of Santa Barbara and Ventura counties and parts of San Luis Obispo, Kern, and Los Angeles counties. The mountains in their region roughly follow the east-west orientation of the coastline and are covered with a variety of chaparral plants, ceonothus, chamise, and manzanita predominate in the coastal ranges, while the sages and yucca are the principal plants of the semi-desert interior country. Paintings are found in wind and water eroded sandstone reefs throughout the mountainous regions. Chaparral, as any backcountry hiker knows, is almost impenetrable without trails. It is this condition that has protected most of the Santa Barbara sites, and at the same time kept all but a few unknown.

At the start of a survey by the Santa Barbara Museum of Natural History, in 1960, 19 pictograph sites were recorded from this area. In two seasons of intensive work, usually depending upon tips from ranchers, hunters, and forest rangers, I was able to raise the number of known sites to over 80. Many of my trips were made with great difficulty as the back ranges are largely without trails and miles of



A GROUP OF STRANGE CREATURES FROM THE HURRICANE DECK AREA. THE HORNED FIGURE TO THE LEFT, POSSIBLY A MALIGNANT FORCE, HAS PARTS PIERCING HIS SIDES WHILE MOST OF THE OTHER FIGURES ARE HEADLESS, PERHAPS INDICATING THEY HAVE BEEN KILLED.



AN ELABORATE POLYCHROME PAINTING FROM SAN LUIS OBISPO COUNTY.



RIGHT HALF OF 40-FOOT PAINTING IN THE CARRIZO PLAIN TAKEN FROM A PICTOGRAPH OF 1890, BEFORE THE SITE'S DESTRUCTION BY VANDALS. THIS WAS ONE OF THE MOST OUTSTANDING EXAMPLES OF ABORIGINAL ROCK ART IN THE UNITED STATES.

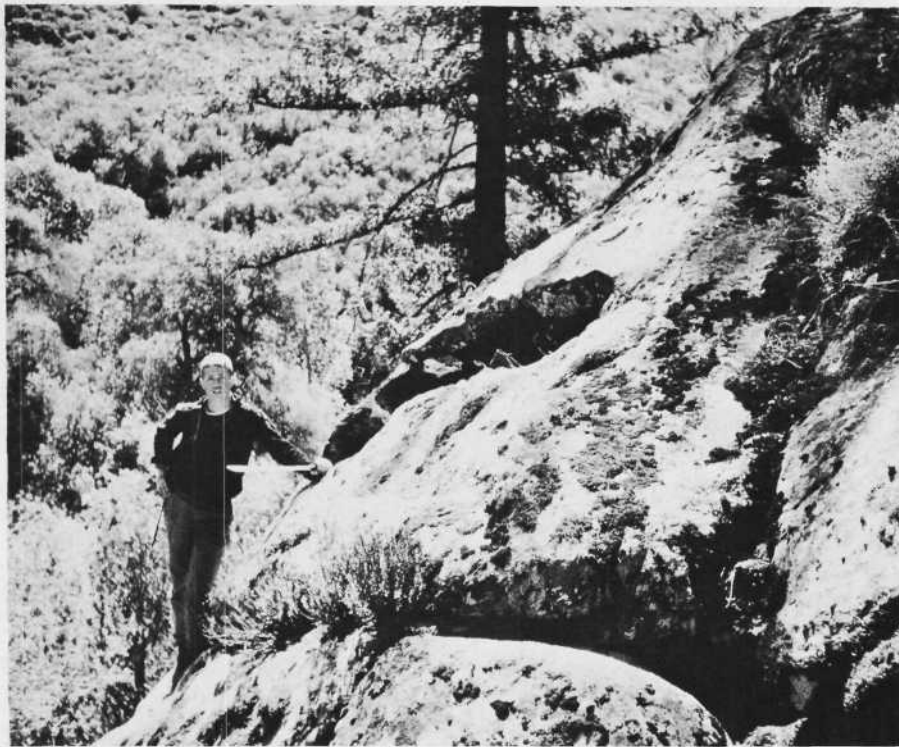
underbrush had to be hacked out with a machete. In such a country, there can be little doubt that many sites are still unknown. Some may be found following a forest fire, others stumbled on by rock hounds or hikers, but the chances of making a find by looking for a painted cave in this vast area without some clue, are remote.

The paintings are usually found on the walls of small caves or rock shelters, but sometimes occur on cliff faces. In the latter, erosion is severe. Usually there are bedrock mortars at the sites with water, a spring or running stream nearby.

A variety of techniques was employed by these prehistoric artists, the most common being a linear style in red. At some sites there are figures done with a series of dots, but the most characteristic Santa Barbara type is the outlined polychrome design. A red star shape might be outlined in black with additional outlines in white and yellow, giving much richness to a simple design element.

Many curious creatures occur combining parts of animals, humans, birds, and insects in the most bewildering and amusing manner. Designs are chiefly abstract and geometric. Anything approaching realism is rare and probably intrusive from other areas.

Colors used by these aboriginal painters were red, black and white, with an occasional use of yellow, green and blue. The red is iron oxide hematite and in shades ranging from dull red brown to bright vermillion. It is known that the Indians in certain parts of the state exposed their hematite ore to fire, the oxidizing effect of the flames turning a dull colored material to a strong brick red. The black was either manganese, burned graphite, or charcoal and the white, diatomaceous earth. The yellow pigment was derived from another iron oxide, limonite, and the dull greens and blues are probably from serpentine. These colors were ground in stone mortars and mixed with an oil binder, either vegetable or animal oil, and the



THE NARROW SLOT TO THE RIGHT OF THE FIGURE OPENS INTO AN ELABORATELY PAINTED CAVERN. THIS SITE WAS DISCOVERED BY DEER HUNTERS.

pigment was applied to the stone surface with fiber brushes, fingers or a pointed stick. At some sites, the stone paint cups pecked into the rocks below the painting still show traces of color. Portable paint cups of shell, stone and bone have been found in burials. It was a common practice to pre-grind the colors and mold them into a fist-sized cake which was stored for ready use. Such paint cakes were standard units of trade as the paint sources were widely scattered.

To the frequent question—who painted them?—we are now able to give some sort of answer. It seems certain that most of the existing pictographs are the work of the Chumash Indians who were in possession of the country at the beginning of the Spanish period. These Indians originally ranged over a territory bounded on the north by Morro Bay, on the south by Malibu Canyon and to the east by the mountains bordering the western San Joaquin Valley. Their culture is called Canalino, a culture shared by some adjacent coastal Shoshoneans to the south. Artifacts of a late Canalino type and objects from the Mission period have been recovered from caves near painted sites. It is known that the Canalino culture had been established on the Santa Barbara coast for several thousands of years and there is little reason to doubt that these people also painted the pictographs.

The Chumash are in many ways the

most interesting of California Indians and had the most advanced culture. They were the first Indians in Upper California to come into close contact with Europeans and were enthusiastically described by the explorer Juan Rodriguez Cabrillo in 1542, and again by Sebastian Viscaino in 1602. In the late 1700's, during the establishment of the mission system in California, a number of priests and soldiers described their culture. Their most spectacular achievement was the ocean-going canoe. This remarkable craft was built of a great number of small split planks which were drilled, sewed together with fiber and sinew and caulked with asphaltum. The canoes were often over 24-feet long and capable of making trips to the channel islands and even to San Nicolas Island 65 miles offshore. In addition, the Chumash made superb bowls, ollas and effigies of steatite, beautiful plates and bowls of wood and excellent basketry. They were a village dwelling people and large towns with a 1000 or more inhabitants described in 1542 were still being occupied 250 years later. Little is known of their religious practices, as the mission system proved fatal to the Chumash long before the day of serious anthropological study. In the early days of the missions, there may still have been Indians who knew the meaning of the strange rock pictures in the mountains, but the padres did not inquire about such obviously pagan symbols.

In spite of this lack of direct information, we can imagine much by noting the significance of rock and sand painting still being done in the Southwest and in Australia. In the Navajo sand painting ceremonies, the object is usually to drive away evil and sickness. In order to do this, the medicine man makes drawings to personify forces of nature or certain animals who will aid in destroying evil influences causing the ailments. In northwestern Australia are the strange *wondjina* rock paintings. These anthropomorphic figures are repainted every year just before the rains by the chief whose tribe owes its beginnings to that particular *wondjina*. This gives renewed strength to the *wondjina* who is the bringer of rains and normal increase of all living things. Some of the paintings in this region are used in fertility ceremonies and others are clan totemic figures.

The mistake made by most people puzzled by the meaning of rock paintings is in trying to identify the design motifs with something within their own experience. Some think there is a story to be told if only the keys were known. Some see Egyptian or Masonic symbols. Others recognize such motifs as suns, birds, snakes and insects. All such speculations are meaningless, as the California Indian neither thought as we do nor did he interpret his ideas as we would. To him the supernatural was as real and as readily visual as the natural. In Chumash country, the medicine men or shamans, created painted visualizations of supernatural beings or forces to be used ceremonially in much the same way as the Navajo medicine man or Australian headman. The Chumash ceremonies, accompanied by singing, dancing and often the use of narcotic preparations, were to bring to the person or community good things such as rain, fertility and health or to destroy bad things.

The duplication of certain basic symbols throughout the world indicates to some people intercontinental connections, when the obvious (if unexciting) explanation is that certain combinations of straight and curved lines suggest the same things to men everywhere. Three of the best known elements are the bisected circle, a fertility symbol; the zigzag line, a water symbol; and the rake pattern, a rain symbol. In certain parts of California there are pictographs and petroglyphs of naturalistic animals probably made in connection with hunting magic, but these are not found in the Santa Barbara region.

The age of these paintings is baffl-



ing, but recent discoveries and experiments have shed some light on the problem. Late Canalino and Spanish contact material dating from around the start of the 19th century have been found in caves adjacent to painted sites. A boulder painted with characteristic pictograph design elements has recently been excavated from a village site occupied in mission times. I have submitted samples of paint from a badly eroded site for radiocarbon dating and though the amount of organic material in the sample was insufficient for a positive dating, the report indicated no great age. A radiocarbon date on basketry found near pictograph sites was 120 years plus or minus 80 years.

The rate of erosion on sandstone gives another clue. The earliest publication on American Indian pictographs (Mallery, 1886) shows many designs from one Santa Barbara site that today are almost obliterated through erosion. Another site pictured by Mallery, the Painted Cave near San Marcos Pass, is in a spot not subject to wind nor rain action and still looks exactly the same as in 1886. A few sites have paintings covered with slow-growing lichens, indicative of respectable, but unknown, age. An interesting painted site near

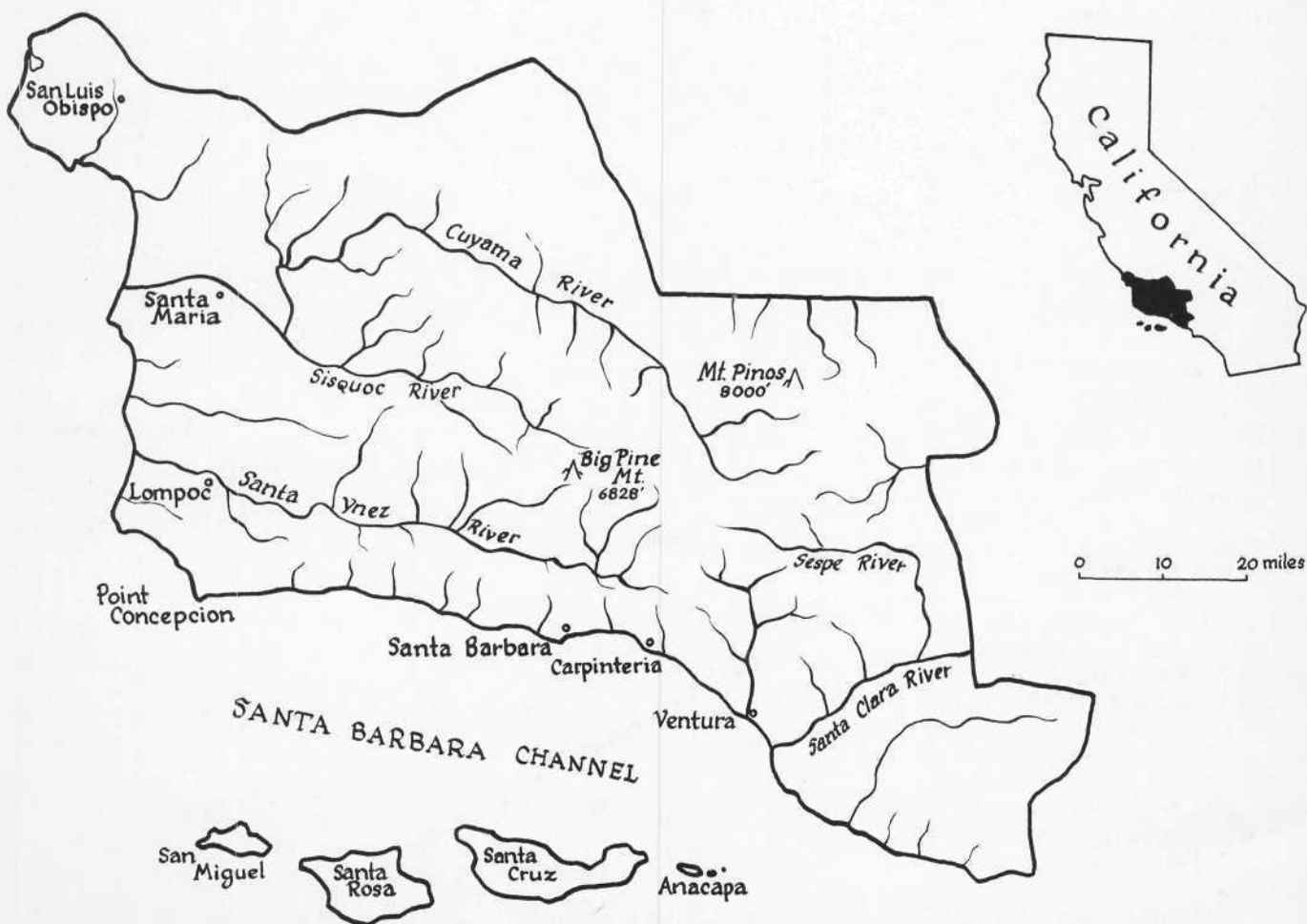
the southeastern edge of the Chumash country has a great many of the typical spread-eagle figures and four obvious horsemen in profile. As these are the only profile figures in the whole region (except for some killer whale petroglyphs on San Nicolas Island), there is a possibility they may be the work of nomadic Indians from the Southwest where horses had been known since Coronado's expedition in the 1500's, or they may give us a dating from the mission period (1769-1836). From these indications, it would seem a reasonable assumption that some of the existing pictographs might be a thousand or more years old and that others were made close to the start of the mission period.

The crest of the Sierra Nevada roughly divides the basaltic rock petroglyph region to the east from the granite and sandstone pictograph zones to the west. There are almost no petroglyphs in the Santa Barbara area. I know of only four and these are mainly of the cup-and-groove type common in many parts of the world. One of these sites, however, deep in the mountains, has some extraordinary petroglyphs. The site is a large sandstone outcrop about 75 feet high with four smoke-blackened caves. These all contain paintings and one

includes 49 pecked representations of bear paws ranging in size from two to eight inches long. It is conceivable that this was the work of a powerful bear doctor, a shaman believed capable of changing himself into a grizzly bear and destroying his enemies.

The slow destruction of these fascinating examples of aboriginal art by erosion is inevitable, but another more immediate kind of destruction faces many of the sites. Any rock painting easily accessible by road or trail is in danger from the senseless vandal who derives some curious satisfaction from carving his name on these pictographs—the more efficient vandals simply shoot them up. Another variety of vandal tries to chip off part of the surface to “take home and show the folks.”

These ancient rock paintings are of great value to the study of early man in California. Any information on painted or incised sites should be reported to the Department of Anthropology, University of California at Berkeley or to the Santa Barbara Museum of Natural History. Both institutions have active research programs on California rock art and the Santa Barbara Museum has many facsimiles of cave paintings on permanent exhibit. ///



# Thorns In Their Sides

By Janice Beaty

To every desert hiker who knows the penetrating power of the cactus spine, to every cactus collector whose most treasured tool is a handy pair of tweezers, to everyone who has ever winced with pain upon encountering our spiny desert succulents, let it be known: nature never intended it that way. The cactus spine may be among the desert's most formidable objects of defense, but this was never its primary purpose.

Cactus spines are nothing more than modified leaves. This may be hard for the cactus wounded to accept, but it is true. Spines arise at stem nodes as do leaves. Their new tips are hard and they lengthen from the base as do leaves. They have developed on cactuses for one special purpose: to aid in conserving moisture.

Ordinary leaves give off a great deal of water through a process called "transpiration." Reduce a leaf to a spine, and the surface from which water can evaporate is all but gone. Plants of many kinds have learned this trick to save water. Defense may be a useful by-product, but reducing water loss is the primary purpose for their formation.

Take a cultivated garden or orchard and neglect it for several years. Chances are many of your plants, especially members of the rose family such as apricots or apples, will develop spines on their stems and branches. These spines actually represent a reduction in growth to cut down on moisture loss. Plant scientists believe that is how all cactuses originally got their start, for the first cactus evolved from a rose.

Between 18,000 and 20,000 years ago, it is believed the islands of the West Indies began a drastic change. Huge mountain ranges arose, blocking the flow of prevailing winds and rain clouds. As the land became drier, certain primitive roses changed their form in order to preserve life-giving moisture. Their leaves grew smaller. Their stems became fleshier, and their thorns turned to spines. Their numbers and varieties soon increased and began to spread: over to Mexico, down through South America, up to North America, wherever the right conditions prevailed. Chollas developed first, then came prickly pears, and later barrels, organ pipes and giants like Mexico's cardons and Arizona's saguaros.

Every feature of the cactus evolved for the sake of conserving water. Leaves turned to spines to reduce evaporation. Stems turned green to carry

on the leaf's function of making chlorophyll. Wax covered stems to further reduce water loss. Stems expanded for water storage. Their thin sap became a thick glue difficult to evaporate. Stem nodes changed to *areoles* (spine-cushion buds) armed with barbed hairs to reduce evaporation. The cactus not only survived; it thrived in desert lands.

It's precious spines preserved water in other ways. A thick matting of spines limited the plant-surface circulation of dehydrating desert air. They also replaced leaves as shade-makers. Impossible? Examine any cactus in the sun and see how its needles create a broken shade on the plant's surface, moving around the plant as the sun does.

Cactus spines undoubtedly discourage animals that would like to get at the plant's juicy tissues. But if this were their primary purpose, if spines evolved deliberately to ward off animals, few cactuses would have survived the long, slow process of change.

No, protection is a secondary benefit. Cactus spines are more than this. They are also more than water-preservers, plant-protectors and seed scatterers. Consider the variety of spines: needles, fish-hooks, hairs, spikes, bristles, barbs, wool.

How did such differences come about? Why did they evolve? What, for instance, is the purpose of the long hairy spines of the Woolly Headed Barrel or the Grizzly Bear Prickly Pear or the Old Man of the Desert? Some authorities say such "wool" protects the growing center. But what about the cactuses that lack it? And why the flat hooks on certain barrels and the long rapier spines on others? Or the lack of spines altogether on certain prickly pears?

This incredible variety in all of nature, whether cactus spines or flower petals or bird plumage, has long overwhelmed man. British anthropologist Jacquetta Hawkes has a most intriguing comment on such variety in nature. She says, "It seems clear to me that each species has the freedom to create its own highest potentiality or to fail to achieve it." Certain cactus spines have achieved theirs. Even those conservative leaf-rudiments display "the fantastic, wanton, unnecessary extravagance of nature."

If this is not the answer, then what? Those who know the cactus spine on intimate terms can only reply emphatically: it is a prickly subject!

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*Responsible persons may explore the restricted La Prieta Game Range if they know how and where to obtain permission. In this article Norman Simmons reveals a new back country experience for desert travelers.*

## EXPLORING LA CABEZA PRIETA

By Norman Simmons

**A**S PRISTINE TODAY as it was before white man ever set foot on it, the 860,000-acre Cabeza Prieta Game Range is surrounded by millions of acres of wilderness that extend from Highway 80 between Yuma and Gila Bend, Arizona, to the Gulf of California.

Administered by the Bureau of Sport Fisheries and Wildlife, the Game Range was named after Cabeza Prieta Peak, a lava-capped granite mountain on the western edge of the refuge. Cabeza Prieta means "Black Head" in Spanish.

Because the area is a military reserve, travel on the Game Range is restricted. However, well-equipped and responsible travelers are welcome to visit many parts of it if they first obtain permission from the Refuge Manager in Yuma (356 First St.) or his assistant in Ajo (1611 No. 2nd Ave.).

Making his way across the vast area on rough trails, today's explorer is reminded of the hardy men who preceded him. Glazed green potsherds seen near a waterhole in the Sierra Pinta bring forth images of Padre Francisco Eusebio Kino, the Jesuit missionary-explorer who passed this way over 250 years ago. He first visited the deep pool of water in the rugged Sierra Pinta in 1699 while on a trip from Mission Dolores in Sonora, Mexico, to the Gila River in Arizona. He and his Indian guides traveled west along the Sonoita River, skirting the west side of the Sierra Pinta. One midnight they halted at the mouth of a deep gorge. Here his

guides showed Kino a watering place high in the rocks and barrancas, where, after a difficult climb they drank of the sweet water. Impressed by moonlight reflected on the white granite, Kino named the spot Aguaje de la Luna—"Watering Place of the Moon." Today we call it Heart Tank because of its heart-shaped appearance.

Evidence of human occupation dates back to about 2,000 B.C., when a people called San Dieguitos by modern anthropologists lived in this magnificent land. Their stone tools and "sleeping circles" are found in and near several of the mountain ranges on the Game Range. From about 1000 B.C. to nearly 1000 A.D., the Armagosa people, successors to the San Dieguitos, occupied the Sonoran Desert. They left stone tools from New Mexico to the California deserts. It was not until after 1700 A.D. that the first pottery-making Indians arrived. Then the Yumans came from the west, traveling east to the Growler Mountains. On the other side of the Growlers, Hohokam people left their characteristic red-on-brown pottery.

The Sand Papago Indian groups appeared on the Game Range area around 1450 A.D., roaming west of the Growler Mountains between the Gulf of California and the Gila River. The Papago Indians occupied the more habitable land they live in today east of the Growler Valley. Both Sand Papago and Papago Indians were encountered by early Spanish explorers.

Recorded history of this part of the Sonoran Desert began with the arrival

of the Spaniard Melchior Diaz, third in command to Francisco Vasquez de Coronado. In late 1540, Coronado appointed Diaz commander of his forces in Corazones, Sonora. He was given orders to go west to the Colorado River to contact Spanish supply ships making their way up the Gulf of California with provisions for Coronado's expedition to Cibola. Failing to make contact, Diaz returned to Mexico, stopping at waterholes in the Cabeza Prieta Mountains on his way.

In 1698, Padre Kino began a series of exploratory journeys that would take him through Cabeza Prieta several times. He was first to traverse and map the whole of Pimeria Alta, a name then applied to southern Arizona and northern Sonora. He traveled several times in the area of the infamous Camino del Diablo (Devil's Highway) which passes through the southern part of the Game Range.

For 20 years after Padre Kino's death in 1711, no Spaniard entered that portion of the Sonoran Desert in Arizona. Then interest was revived in the area and once again missionaries visited the Indian villages, continuing their work in Arizona until the belligerent Apache Indians forced them to leave, around 1820.

Following that tragedy, the area remained unoccupied by other than nomadic Sand Papago Indians until the U.S.-Mexican war of 1846. After the war, a gold rush to the placers in California began and the Gila River and waterless Camino del Diablo became important immigration routes.





THE WEST SLOPE OF THE GROWLER MOUNTAINS, NAMED AFTER AN EARLY MINER, JOHN GROWLER. THIS IS A MESA-TYPE RANGE COMPOSED OF QUATERNARY AND TERTIARY SANDSTONE, TUFF, AND CONGLOMERATE OVERLYING MESOZOIC GNEISS AND GRANITE. IT CONTAINS ANCIENT WATERHOLES, INDIAN TRAILS, CAMPSITES AND PETROGLYPHS. BIGHORN SHEEP, ANTELOPE, MULE DEER, PECCARY, AND OTHER GAME ANIMALS FREQUENT THIS AREA.

Over 400 gold-seekers are said to have perished on the Camino del Diablo.

In 1863, the Game Range area became part of the United States as a result of the Gadsden Purchase. Plans were then undertaken to exploit the rich copper deposits near the mining camp called Ajo, not far from the eastern border of the present Game Range. Prospectors and other immigrants flowed into the area. By 1915, a copper ore reduction plant was constructed in Ajo and the camp became a roaring town of 5000 people. Mining is still the principal occupation in Ajo and a few prospectors hunt minerals in the surrounding desert. However, much of the activity was stopped during World War II when the area was made an aerial gunnery range.

This relatively undisturbed territory is an ideal desert wildlife refuge. The once seriously endangered desert bighorn sheep thrive in the rugged mountains. A remnant population of Sonoran pronghorn antelope roams the broad valleys where its keen vision is often unobstructed for miles. Peccary dig for roots and mule deer occupy the more verdant eastern end of the refuge. Gambel's quail, white-winged doves, and a variety of other birds are also provided a refuge.

Though the Game Range is in the arid part of Arizona, it supports desert plants such as creosote bush, palo verde, ironwood, and the giant sahuaro cactus. The organpipe cactus is common in the southeastern part and a few specimens of the unusual sinita (old man) cactus also grow.

Among the unusual plants are the elephant tree (relative of the Old World tree that produces frankincense), the red-sapped limber bush, the poisonous Mexican jumping bean and the rare Kearney sumac.

Historic old roads and trails are patrolled by trained wildlife managers in radio-equipped, four-wheel-drive vehicles and on horseback. They sometimes cover the vast area by helicopter and light fixed-wing airplanes. The rugged mountain habitat of the desert bighorn is patrolled on foot. Thus the wildlife manager keeps informed of the condition of the wild animals he manages and the vegetation and water that sustains them.

The Bureau of Sport Fisheries and Wildlife has augmented the sparse water supply by enlarging natural waterholes and building new ones. Artificial holes to catch rain water are blasted from the solid rock of the mountains and earthen reservoirs are excavated in the valleys. Careful records are kept of wildlife observations and a special study is being made of the activities of the elusive desert bighorn sheep.

The Cabeza Prieta Game Range is a treasurehouse of information for researchers wanting to learn more of the nomadic desert Indian, the trek of the Spaniards, the routes of gold-seeking '49ers, and native desert animals and plant life. It also provides a true wilderness for back-country explorers who obtain permission to enter it and agree to "take nothing but pictures and leave nothing but footprints." ///

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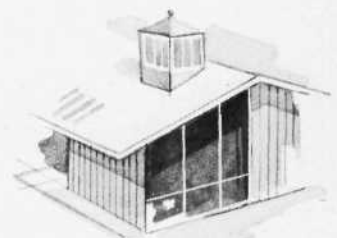


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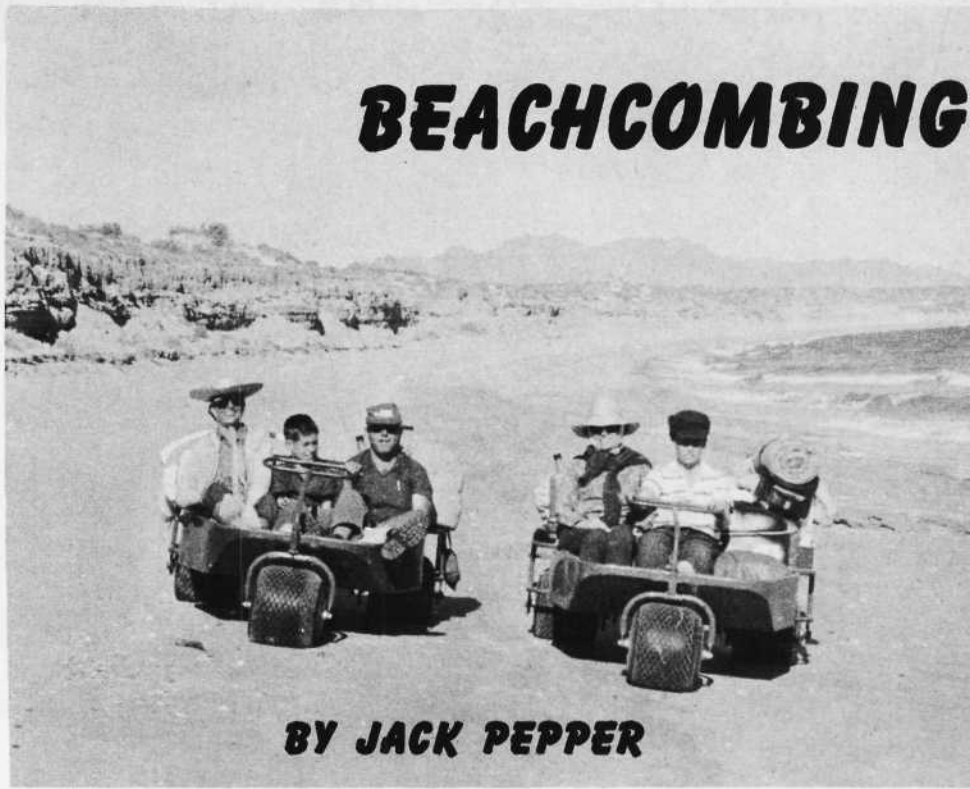
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**I**F YOU ARE faced with a three-day weekend and tired of crowded Pacific Ocean beaches, you will find San Felipe and a trip to the fishing village on the Gulf of California more fascinating than anything on your television set.

And, if you take along a guide book and an elementary Mexican language book you'll have fun gaining knowledge about Baja California as you drive the 120 miles down the paved road from Mexicali to San Felipe.

The Mexican part of the trip can be driven in four hours in a passenger car. However, if you want to take side roads or drive south of San Felipe toward Puertocitos, a pickup or a 4-wheel-drive such as a Toyota or Datsun is needed.

In our case we were able to travel 20 miles along the surf from San Felipe, thanks to a new and unusual vehicle called the Sidewinder. A triangular-shaped vehicle, it has three wide airplane-type tires, a two-speed-forward motor, and is designed to travel on beaches or across rugged and roadless country. And that's just where it took our two families during a recent trip.

We started in West Covina at the home of Marvin Patchen, who had experimented with the Sidewinder in Baja once before. However, to our knowledge, we were the first families to go as far south as we did.

With Marv's vehicle loaded in the back of his pickup and ours in the back of our station wagon, we arrived at San Felipe in the afternoon of the

first day following an interesting drive through Mexican villages and along the salt flats of Laguna Salada.

(If you plan to stay in Baja more than a day you should stop at the Mexican custom's office and get a three-day tourist permit. All that is required is identification and a copy of your birth certificate. And if you are going more than 30 miles south of the border, it is best to have a small pox vaccination certificate. If you do not have one, however, the American customs will vaccinate you when you re-cross the border.)

A picturesque commercial and sportsmen's fishing center, San Felipe has motels, restaurants, and camping facilities. Fishing boats may be rented, although there is excellent surf fishing. Spring is the best time of the



MRS. GEORGE LENNARD AND MRS. R. J. TAYLOR, CHULA VISTA, CALIF., INSPECT BEAUTIFUL SHELLS COLLECTED ON THE BEACH. LINO GARCIA AND HARRY LATTIMORE, YUMA, ARIZONA, HOLD CATCH OF DELICIOUS TOTUAVA.



# ON THE BAY



year for fishing. If you plan to stay at a motel during the big season, it is advisable to make reservations. Many people find the uncrowded beaches excellent sites for rolling out a sleeping bag and slumbering under the stars.

The harbor, with its graveyard of old boats and the arrival of the shrimp and totuava boats, is loaded with atmosphere, so bring a camera.

After unloading our Sidewinders and arranging to leave our cars at a seaside *ramada*, we took off along the sand. Five miles down the beach we stopped to greet two Mexican fishermen. When their mouths dropped open and they stared at us, we realized what a strange sight we must be in our adult kiddy cars. Marv<sup>2</sup> and his wife, Letha, and their son, Mike, were in one Sidewinder and my wife, Choral, and our son, Trent, were in the other. Strapped on the back of each vehicle were sleeping bags, fuel, food and other camping equipment, since there are no stores between San Felipe and Puertocitos. Several times during the next two days we stopped to allow friendly fishermen to inspect our strange Gringo vehicles.

In my sleeping bag the first night my muscles and nerves relaxed while I watched the stars and the moon streak patterns on the white sand. We felt a million miles away from civilization, yet we had left Los Angeles only that morning!

ABOVE, A GRAVE ON THE BEACH OF "A FISHERMAN HOME FROM THE SEA" IS DECORATED WITH SHELLS, DOWN THE UNCROWDED BEACHES IN THE SIDEWINDERS, SHRIMP BOATS IN THE HARBOR AT SAN FELIPE.

During the next two days the few people we saw were Mexican fishermen and several "Americano" families who were fishing and collecting shells at a campsite 10 miles down the beach from San Felipe. There are three of these beach campsites south of San Felipe but they may be reached only by a pickup or 4-wheel drive vehicle. (Be certain to have a detailed map of the area or check with San Felipe authorities as to which road to take to these beach campsites, as some roads are washed out or end in soft sand. Do NOT try it in a regular passenger car.)

As we explored the beaches, we occasionally came to cliffs where we had to turn our Sidewinders inland to circumvent them. This way we saw Baja's desert too.

As supplies diminished, we filled their empty boxes with shells. After two nights and two days, relaxed and tanned by the warm sun, we returned to San Felipe loaded with these treasures. Six hours later we were back in West Covina. I knew our trip was a complete success when my son said:

"Gee, Dad, that was a lot more fun than staying home and watching television." ///



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# Land Rush To Wupatki

**F**ROM UTAH THEY came. And from New Mexico. Up from the southern deserts of Arizona they flocked to the strange black desert between the San Francisco Peaks and the Little Colorado River. The word was out. Shouldering bags of corn and planting sticks, they left homes behind them. With families, dogs and domesticated turkeys they came for 50 years; a ceaseless flow of bronze-skinned farmers filling the once-barren land with cornfields, villages and laughter.

The year was 1120 A.D. The place, Wupatki, Arizona. And this was the climax of the first great land rush in the Southwest.

Incredibly enough, a volcano was the cause. In 1066, 64 years earlier, the earth had rumbled and rent another opening in the vast volcanic field of northern Arizona. Ash and cinders spewed skyward for months, raining blackness on everything for 800 square miles around Sunset Crater, the new cone. As the volcano grew, the few native inhabitants fled from their crude pit houses to the flanks of the San Francisco Peaks.

These Sinagua (see-NAH-wah) people watched in despair as their farmlands disappeared under a thick ash blanket, destroyed forever, or so they thought. But as the eruptions died away and the seasonal rains fell, they noted in amazement that weeds and grass were sprouting thicker and higher than ever before.

They planted corn. It flourished. And not only near the mountains, but out on the desert where no cultivated crop had ever grown. The black ash was a green thumb transforming the

barren land into a rich garden. Acting like mulch, it trapped the moisture and prevented the scorching sun from evaporating it.

If the Sinagua farmers had hoped to keep their discovery to themselves, they failed to reckon with the Indian "grapevine." First single scouts, then families, and finally whole clans filed onto the black desert. The rush was on.

Assorted groups settled near the closest water supply—a spring, a water hole, or perhaps a limestone sink. They must have eyed one another with suspicion at first, for the earliest dwellings were small well-fortified pueblos. But sooner or later necessity overcame caution, and they intermingled.

Here was a unique situation in prehistoric America. Divergent Indian tribes speaking alien tongues, holding different beliefs and customs—some advanced, others quite primitive—gathered together at Wupatki to cultivate corn in peace.

The Hohokam (ho-ho-KAHM) came from the south bringing their unique ball courts. The Anasazi (ah-nah-SAH-zee) came from the north and east introducing their pueblo apartment-building techniques. From the south and east came Mogollon (mo-go-YOHN) groups, and from the west the shadowy Cohonina. The longer they lived as close neighbors, the more alike they became, until at last they mingled, adopting the best of each culture.

The Sinagua abandoned their pit houses and began building pueblo-type dwellings of masonry, like the

**By Janice Beaty**



BELOW: WUPATKI PUEBLO CONTAINED OVER 100 ROOMS DURING ITS HEYDAY IN THE 1100'S. THE RUIN NOW REVEALS HOW THE SINAGUA TOOK ADVANTAGE OF NATURAL ROCKS IN BUILDING THEIR FOUR-STORY STRUCTURE. RIGHT: WUPATKI RUIN WITH "AMPHITHEATER" IN FOREGROUND. IT RESEMBLES THE UNDERGROUND "KIVAS" OF THE ANASAZIS BUT NEVER WAS COVERED. WE CAN GUESS THAT IT MIGHT HAVE BEEN USED FOR PUBLIC CEREMONIES OR DANCES, YET NO OTHER SIMILAR STRUCTURE HAS EVER BEEN FOUND. (Photo by Author)



Anasazi's. Blocks of native sandstone were simple to quarry, being already split naturally, along horizontal planes. Soon stone apartment buildings dotted buttes and mesas.

Largest was a 100-room, four-story structure called "Wupatki" or "Tall House" by present-day Hopis. Rising from a sandstone spur at the base of a black lava mass, it housed 250 to 300 people during the boom years between 1120 and 1210 A.D. Tiny rooms stored corn and beans. Larger ones were sleeping quarters for single families.

Below the pueblo, a circular stone "amphitheater" or "dance plaza" occupied a central position. It resembled the sacred underground chambers of the Anasazi, but had no roof nor other traditional features of their "kiva". To this day its use remains a mystery, for no similar structure has ever turned up.

With all the necessities of life and no internal discord, Wupatki and its neighboring villages seemed destined to enjoy a long, fruitful existence. Little did the bustling boom towns realize that they were bound to Nature's fickle whim. She had made the desert bloom. In the early 1200s she commenced to undo the miraculous growth.

Black ash continued to absorb the seasonal rains, but the rains, themselves, suddenly slacked off. Year after year passed by with fewer summer showers. As the corn shriveled, many Indians drifted back to their homelands, but still a hard core of Sinagua and Anasazi clung to the land, believing the rains would fall eventually. They had a long wait. Nearly *one hundred years* of drought

lay ahead, climaxed by the Great Drought of 1276 to 1299—23 years when almost no rain fell at all.

Long before this, the fierce desert winds turned the region into a dust bowl, stripping away the precious black ashes . . . returning the land to the barren condition it had been before Sunset Crater erupted. By the mid-1200s Wupatki was completely destroyed. Even the hardiest tribesmen had been forced to retreat. Most of the Sinagua moved south into the Verde Valley where remnants of their tribe already dwelled. Montezuma Castle and Tuzigoot pueblos became drought-refugee villages. Others moved north and east to the Tsegi Canyon area where huge caves housed the pueblos of the Betatakin and Keet Seel. Still others ventured across the Little Colorado River to become (perhaps) ancestors of the present Hopi.

First white men to view the deserted region were the Spanish between 1583 and 1605. The only Indians they met were small hunting bands of Havasupai or Yavapai, and these clung to the slopes of the San Francisco Peaks.

For Wupatki the rush is over. But its fascinating ruins and forbidding environs should not be overlooked by the modern Southwestern land-rusher. A few miles from the Monument entrance stands the ruins of Nalakihi (Lone House), one center of the ancient building boom. Within a single square mile 100 prehistoric sites have been found. Excavations showed that 1/3 of Nalakihi's pottery was made by the Anasazi, 2/3 by the Sinagua. Unearthed burials revealed many owl bones . . . perhaps a sacred bird to its residents.

On a volcanic butte just up the trail stands the Citadel, a fortified pueblo with loop holes through which early defenders could shoot arrows. Eight other ruins are visible from this rise, as well as the limestone sink behind it with a golden eagle's nest in its rim. Across the way a side road leads .2 of a mile to Lomaki, another good-sized ruin.

Most rewarding of all is Wupatki Ruin itself, 10 miles down the main road and one of the most impressive pueblos of northern Arizona. Crumbling walls outline dozens of rooms. Remains of firepits for heating and cooking dot earthen floors. Metates (grinding stones) too heavy to be carried away, stand in mute evidence of the Indian's abrupt departure. Bones of parrots and macaws and a copper bell were found in its trash heap . . . all from Mexico. A small museum houses other artifacts.

Standing high at the head of a paved trail, the modern landrusher can take in the entire ruins, including amphitheater, at a glance. Further below he will find the unexcavated ball court. If he is aware of Wupatki's story, he can almost imagine the ancient sounds of the busy pueblo at work: the endless crunch of the corn grinder, the sizzle of corn cakes on a hot stone slab, the laughter of girls hauling water up from the spring in dripping clay jars, the raucous squawk of a parrot.

But not today. Today he hears only the hiss of hot wind through a pinyon's gnarled limbs . . . only the scuttling of a lizard through a crack in a broken wall. For Wupatki the rush is over.

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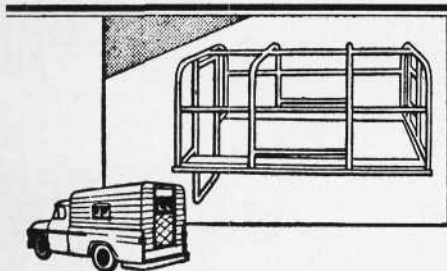
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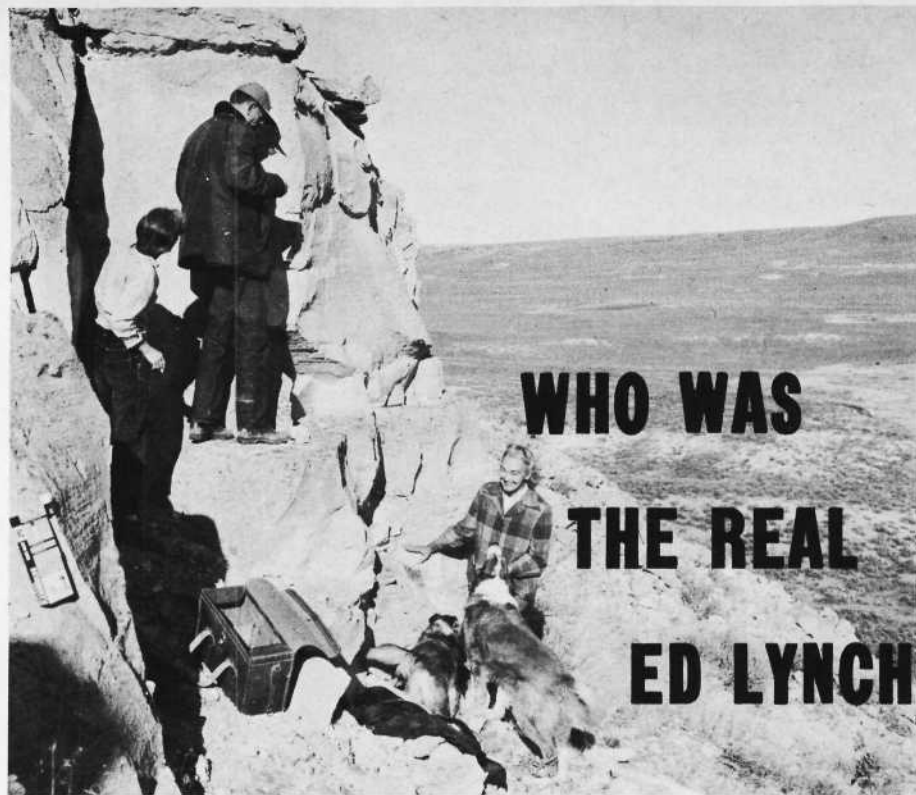
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**F**AR OFF THE beaten track in a part of Nevada that few people know is a strange message written on rock:

*Ed Lynch  
1807 - Aug. 1  
I am with explorers  
3 kild of my  
party  
Indians*

A hoax? Or an important clue to an otherwise lost facet of Western history. No one knows.

Sally Morris of Winnemucca found the inscription some months ago during a rock hunting expedition. She and her husband, Sandy, examined the lettering with interest. What particularly attracted their attention was the date—1807—and the amount of lichen growing over and into the message. In their many years of prowling deserts to collect rocks, fossils and Indian artifacts, the Morrisses had seen nothing like it.

Sally Morris agreed to guide my husband and me to the site, which isn't easy to find. We left Winnemucca on an early Sunday morning and drove 35 miles north on pavement. Leaving the highway we took off up hill and down canyon, through ranchyards and gates, for another 30 miles. Sally's directions were appreciated; there were two 90-degree turns where they were least expected and at the crest of one hill the road dipped into a steep curve below which lay a metal frame full of shattered safety glass.

"I call that one 'windshield corner,'" said Sally.

We rattled and bumped along fencelines and washes until Sally pointed to a pale-colored bluff rising in odd isolation near the juncture of two streams. "That's where we're going," she said. "And when we get there, it's a climb." She wasn't fooling.

We left the Jeep at the edge of a sometimes road and set off afoot through a tall stand of wild rye to the base of the barren bluff. Sally picked up a fine rock specimen she called a "snakeskin," a yellowish agate with a beautiful network resembling scales. These she explained, were what she and Sandy were seeking when they climbed to the rimrock. We struggled upward for another 200 feet until at last we stood on a narrow shelf beside the inscription, wondering whether to be thrilled or disappointed. Both feelings were there.

The inscription is cut into soft rock barely below the top of the bluff; possibly it slid down from a higher position at some earlier time. The area carrying the words is darker than most other sections of the same material, but we were dismayed to find a number of other graffiti in the same general area—names and initials mostly, with the dates 1907 and 1920 among them, and even a sketch of a profile under a wide hat.

None of the rock lettering, except the one that first attracted Sally Morris' attention, appeared old, how-





by  
**Peggy Trego**

ever, and many of the scattered scrapings seem shallower than the one we had come to see. The dates "1920" and "1907" looked as though they had been cut the day before, although a later inspection under a magnifying glass showed bits of lichen in the latter.

The view from the rimrock is wide and wild. The bluff's prominence is the highest point for at least 10 miles in all directions and the flatlands bordering the streams are patched with wild hay.

Following our first trip, we made a recent one to the inscription, but it left us as puzzled as the first. We are still not sure whether the date is August 1 or August 14; what could be a "4" is faintly discernible to a fingertip. There is no doubt, however, about the "1807." It is meant to be exactly that—not "1897" or "1907." This fact alone makes the inscription definitely one of two things: hoax or truth. There are arguments on both sides.

On the side of hoax, perhaps the name Ed Lynch was contrived. Or, perhaps, an Ed Lynch existed at a date later than 1807 and a peculiar quirk of humor led him to cut a fanciful message into the rimrock.

The first white man recorded in what is now Nevada was Peter Skene Ogden. Ogden trapped beaver along the Humboldt River to a point near the present site of Winnemucca in 1828. While there is an immense difference historically between 1807

and 1828, there is much to consider on the side of possibility.

It is known that that were explorations going on in the Pacific Northwest in the first decade of the 19th century. Particularly were these men after beaver, and the area below the bluff probably teemed with beaver 154 years ago, as both its streams reach the Humboldt. Then, too, the lonely bluff would have been a good campsite for a party of explorers menaced by Indians. Ambush there would have been impossible.

Perhaps the group leaving the bluff met the same fate as the "3 kild." Indians of this area were reputedly hostile. Some of the group may have struggled back to safety, their stories never written. Perhaps, even, a record exists. But where? The old form of the verb, "kild," may indicate authenticity. Lichen samplings so far have proven nothing definite, although further study of them and of the rock formation itself remains to be made.

Is Ed Lynch a myth, or Nevada's first pioneer?

As Sally Morris says, "It's something to ponder." ///



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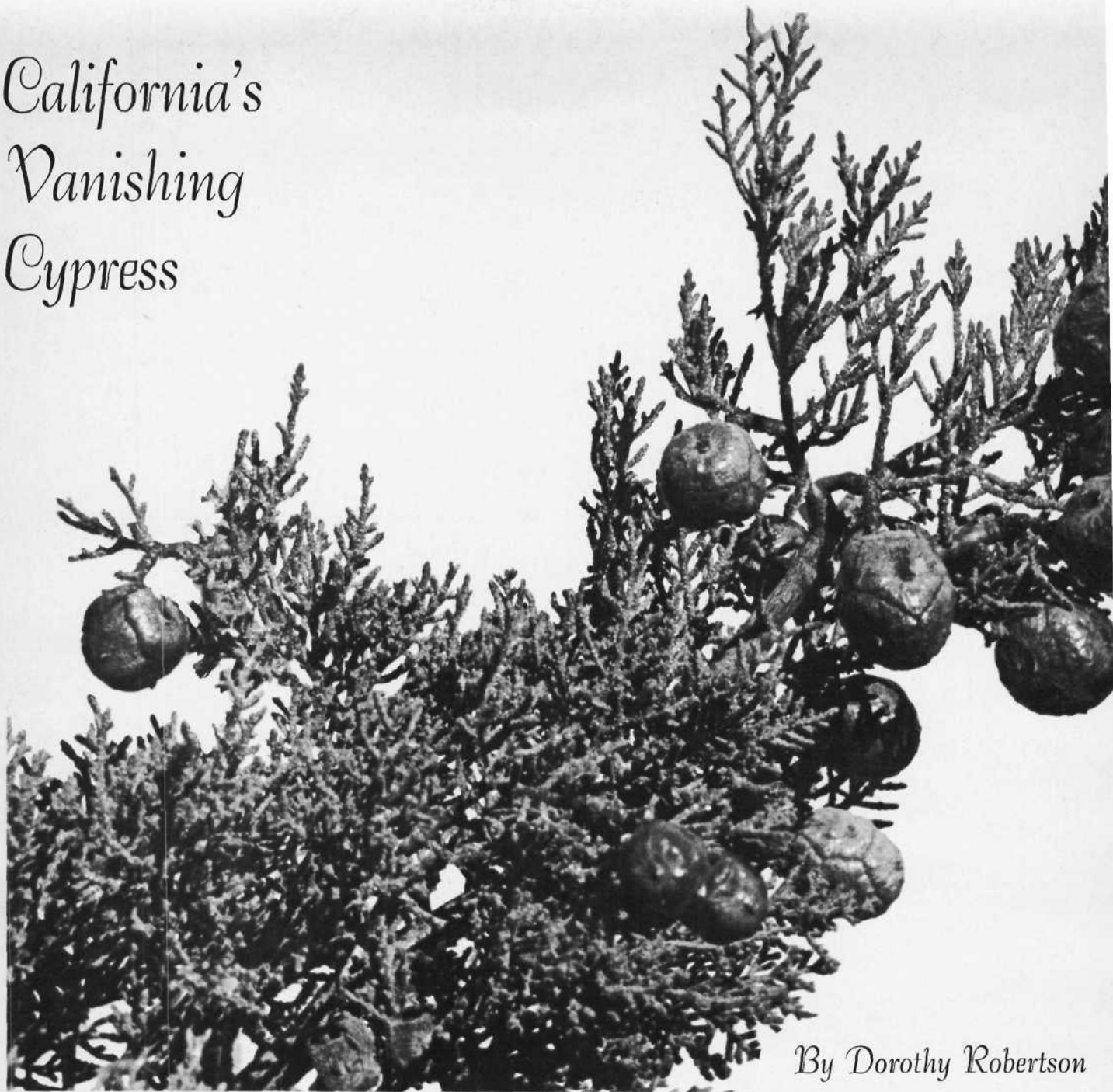
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# California's Vanishing Cypress



By Dorothy Robertson

**T**HOUGH SOUTHERN Californians may not realize it, they possess four groves of a rare cypress species that grows nowhere else in the world.

In a semi-arid region at the southern tip of the Sierra Nevada, these four groves center around the Piute-Breckenridge - Greenhorn Mountain region, adding yet another point of interest to the Kern County Lake Isabella vacation country.

A vanishing species due to climatic changes, the Piute cypress (*cypressus nevadensis* Abrams) was first discovered in 1915 by LeRoy Abrams, a noted botanist of that time. A distinct species, the Piute cypress was named for Piute Mountain, its home ground.

Healthy specimens attain an overall

height of approximately 30 feet with a trunk circumference of from one to two-and-one-half feet. Foliage in summer is a dense blue-gray-green; in winter it turns to a fine, glowing green. February and March, however, is the time when the Piute cypress attains its fully glory. Then each bushy pyramid is powdered with the gold overtones of tiny male flowers which cover them at that period.

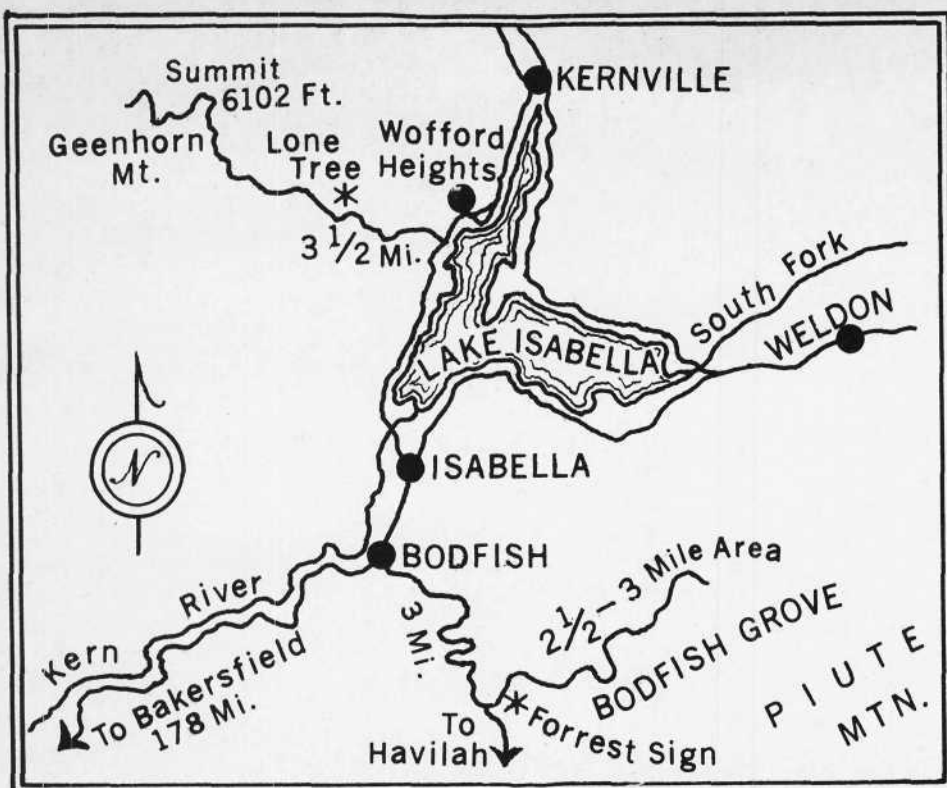
The bark of the lower trunks is a grayish-brown, narrowly furrowed, flat-ridged and quite fibrous. The upper part of the trunks, which seldom peel, ranges from cherry-red to a pale brown. The twigs of these unique trees are distinctly four-sided, slender and flare out in all directions. If you should examine them you would find that the gray-green

"leaves," approximately one-sixteenth of an inch long, are glaucous and often whitely resinous. Each tiny, sharply acute and keeled leaf possesses an active resin gland situated well above the middle and you are instantly aware of its fragrance — and stickiness, if you are careless in examining it!

The cones possess approximately ninety seeds per cone; each seed presents a conspicuous winged margin, and is a bright, rich tan in color.

Ernest C. Twisselmann, a California botanist, surmises in his "Leaflets of Western Botany" that once, in less arid times, the Piute cypress woodlands must have stretched across the Mojave Desert. He based his findings upon the fact that fossils found in both Sand Canyon and Last Chance





Canyon, (a region rich in fossils) in the El Paso Mountains of the Mojave, closely approximate the now rare Piute cypress species.

Located in Black Canyon at the south end of Piute Mountains, the Piute cypress shares the steep slopes with Oneleaf Nut Pine, Digger Pine, California Juniper, blue-leaved Douglas Oak and Ephedra or Mormon tea, a dwarf-cousin to the conifers.

Another grove covers some forty acres on the north side of Breckenridge Mountain. The largest grove, however, lies between the historic old ghost towns of Bodfish and Havilah where mountain ridges protect them from the hot dry breath of summer winds.

The smallest "grove," which is certainly a misnomer, consists of but one lone tree growing on Greenhorn Mountain. This handsome pyramid-shaped tree stands below the bank of the creek on the north side of the Greenhorn Mountain Pass road, just three and one-quarter miles south of Wofford Heights. It is easy of access, and only a few hundred yards west of the Pala Ranches.

Prior to 1961 there were three of these handsome trees in this location, but a sudden and unfortunate fire in '61 killed two of them. Evidently the Piute cypress is a fire species, for I noticed approximately 50 little seedlings growing near the base of the burned trees. The heat of the fire must have popped the cones, thus releasing seeds. They appeared healthy, and the site is protected by mountains. However, there are seri-

ous drawbacks facing the comeback of these young seedlings, for cattle water at the tiny creek.

Still in the planning stages, the Forest Service's establishment of a "natural area" in the Bodfish Grove would incorporate the firebreak and access roads a few miles south of the Kern River Canyon highway. At present, the narrow dirt road is accessible to any type of automobile except during wet weather.

From the Bodfish Canyon road junction with Highway 178, turn south on the road to Havilah, a ghost town of earlier gold digging days, and continue for three miles up the steep incline to Bodfish Saddle. At its ridge a Forest Service sign with the numbers 27 SO 2 stands on a red clay road that turns east. Follow it for two or three miles to the Piute cypress forest.

This Bodfish Grove is the most scenic, to my mind. From the road looking northwards, blue waters of Lake Isabella sparkle in desert terrain against a pine-dotted backdrop of snow-powdered Sierra peaks.

Easier of access, however, is the short run from the lake up the Greenhorn Mountain Pass road to the tiny grove of one lone tree and seedlings. Here is a safe parking place on the south side of the highway just below and opposite the lone cypress, standing with its feet in the creek.

What a pity that those once extensive groves on the Mojave Desert should have vanished so completely; but what a blessing a few remain to be preserved!

///

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# New Source for Old Bottles

By E. Francis Long



**A**SIDE FROM the original prospector for desert gold, no other wanderer of the wastelands has pursued an avocation with such energy and singleness of purpose as the bottle collector.

The immediate result of this frenzied activity is, of course, a serious depletion of bottles. Ghost-town dumps have been "panned" as thoroughly as were the placer sands of the Mother Lode country a century ago.

The newest sources for antique bottles, and one relatively untouched at present, is the ranch dump. Long before the ghosttowns bloomed and faded, the humble homesteader was carving out his little rancho in the fertile canyons of the desert, wherever water was available.

The ranch bottle, as might be expected, is of a different genre than the ghosttown bottle. Wine and beer bottles are more common than whiskey bottles, and spice, extract and patent medicine bottles are found more often than those of perfumes, inks and opiums.

Never will I forget my first successful ranch "dig." The original clue was a small grove of trees visible from the road, on a relatively treeless plain. Under the trees lay a mound covered with native desert growth. A little probing, however, revealed rotting shingles and worm-eaten timbers. Nearby, other irregularities in the surface of the ground indicated spots where an outbuilding had stood.

A quarter of a mile away, flood waters eroded a deep gully which, through the year, had widened and deepened into a canyon 40 feet deep and, in places, 100 yards wide. Here the rancher dumped household trash over the precipice into a canyon. Continuing erosion crumbled the soft clay banks which now covered older parts of the dump. More recent trash lay on the surface several feet below the canyon rim. Rolls of barbed wire, a crumbling sofa and other household discards presented a discouraging picture as far as digging was concerned. However, by tackling one object at a time I soon cleared the area down to bare earth, and suddenly shrieked when a beautiful dark green wine bottle appeared. Its slightly deformed neck was still wrapped in foil which read, "Sierra Mercantile Co., San Francisco."

Within a few minutes others lay uncovered. No two were quite alike, but all were equally distinctive in their lustre, lack of mold marks or lettering, high "kick-ups," bubbly glass and "laid on" lips. A large

bottle bore the prized horizontal rings throughout its height, made by irregularities in the mold as it rotated about the hot, soft glass.

Two beer bottles with applied necks next appeared, their heavy glass brown and bubbly. Both were embossed on the bottom with W. S. & F./MIL.

The prize find of the day was one of the famed E. & J. Burke "cat bottles." This dark green, almost black, bottle with the picture of a cat embossed on the bottom was blown near Liverpool, England, possibly as much as 100 years ago. It had contained Guinness Stout and, along with many thousands of similar bottles, been exported from England to the West Coast of America sometime during the latter half of the 19th century. Guinness Stout is still sold in England under the "cat" label, but the bottles are modern and the cat now printed on the label.

Molds used for this bottle were so crude and ill-fitting that molten glass had extruded and hardened in great goblets along its mold seam. The glass blower then returned the bottle into his hot furnace to melt off the extruded "flash." In so doing, he left the bottle in a moment too long and the entire outer surface of the glass melted and ran. Thus the bottle cooled and remains today, looking like it had been varnished with too liberal a coating and the varnish had hardened with the drip marks showing.

Since most ranch dumps are located on private property, it is well to obtain permission from the owner before starting to dig. I overlooked this little point one week-end and, looking up from the pit I had dug, faced the startling spectacle of a leather holster strapped around the waist of a stern-faced stranger! He turned out to be the owner of the property. Discovering that I was one of those "bottle nuts," he was more amused than annoyed. However, both of us would have felt much more comfortable if I had taken the trouble to stop at his ranch house to ask permission.

Nevertheless, don't be surprised if these residents of remote desert ranches regard you as just a little funny in the head. Living far from the artificial stimulus of civilization themselves, they find it difficult to understand a city dweller's motive for driving all night to reach a lonely spot, working like a *bracero* digging under hot sun, and then driving all night back to his home.

Come to think of it, I don't understand it either. But that's the way it is!



# MERCUR, UTAH by Lambert Florin

First in a series of ghost town locales written especially for DESERT readers by famous ghost-town chaser Lambert Florin, author of *Ghost Town Album*, *Ghost Town Trails*, and *Western Ghost Towns*, all published by Superior Publishing Company.



THE OLD mining camp of Mercur had almost as many lives as a cat. Prospectors roamed the gulch called Lewiston Canyon all through the 1860s searching for gold. One, L. Greeley, found enough in 1869 to stake a claim, but quit when the creek dried up in a spring, making panning impossible. In the next decade, when silver was found in paying quantities, 2000 people populated the camp, at that time named Lewiston for the canyon.

After a few years, silver gave out and the town died again. Then a Bohemian, Arie Pinedo, discovered mercury on the site. As Mercur, the Bohemian version of Mercury, the place boomed—only to lie down once more when extraction of mercury proved commercially unprofitable. About 1890 big-monied men formed a combine to mine a newly discovered vein of gold. Recovery methods recently developed in Colorado were

applied, soon producing millions of dollars in gold.

A narrow-gauge railroad was brought up to Mercur about 1896 and the future of the camp seemed assured. But no! A fire raced through the town and, lacking sufficient water to fight it, citizens saw their town leveled. Quickly rebuilt, it was again destroyed by flames a few years later—and again rebuilt. By 1910 Mercur was larger and more prosperous than ever. And then, in 1913 its gold deposits ran out.

A last lively period for Mercur began in 1934 when a side canyon produced a wealth of gold. This boom continued until 1951, when rising costs, coupled with the fixed price of gold caused a complete cessation of activities.

Today Mercur is a true ghost town, but while such a status may be permanent, it wouldn't be safe to bet on it!

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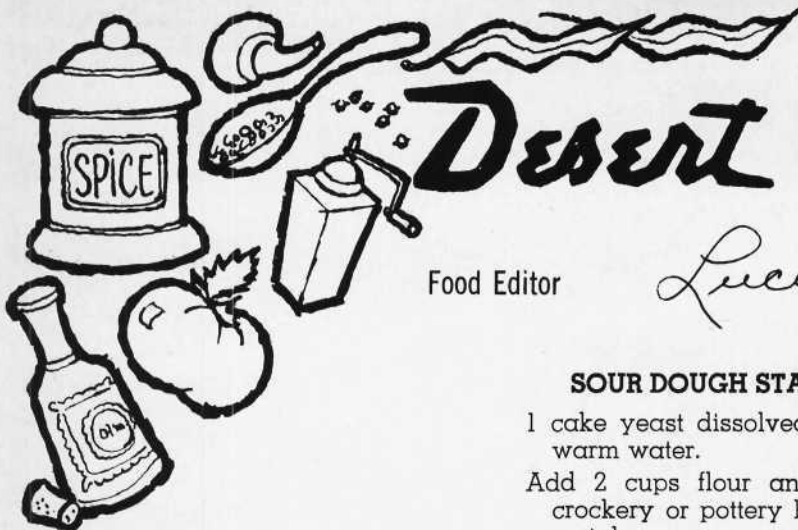
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# Desert COOKERY

Food Editor

*Lucille Iredale Carlson*

*We have had requests from several subscribers for a sour dough recipe. Two of our good friends have given us their recipes, one, a rancher in Wyoming, the second one is from Jim Hunt, of the San Juan Trading Post in Mexican Hat, Utah.*

## SOUR DOUGH BISCUITS

Half fill bowl with flour. Pour in desired amount of starter, add salt and about 1/8 teaspoon soda mixed with enough water to dissolve the soda. Stir and mix until you have a stiff dough. Roll to 3/4-inch thickness, cut with biscuit cutter and place in a greased pan, dipping so there will be grease both top and bottom. Let rise for 45 minutes. Bake in hot oven, 450 degrees, for about 25 minutes.

Add flour and water to the sour dough crock or jug, mixing the amount you plan to use. It is better to use all that will pour from the jug once a day, as enough dough sticks to the jug or crock to start another batch. Keep jug at room temperature, or it will keep at least a week refrigerated.

## JIM HUNT'S SOUR DOUGH

Boil a medium sized potato until it almost cooks away in the water. Put this in a crock or enamel bowl. There should be 2 cups of potato water. Add 1 tablespoon sugar and enough flour to make a batter a little bit thicker than hot cake batter. Place the bowl in a warm place (temperature should be around 90 degrees). Starter should be ready to use in about 36 hours. You may add 1 cake yeast to starter as first batch will be like yeast bread, but thereafter will be sour dough.

## SOUR DOUGH STARTER

1 cake yeast dissolved in 2 cups warm water.

Add 2 cups flour and place in crockery or pottery bowl, not in metal.

Let set in warm place for 3 or 4 days.

When it begins to ferment, skim off top. This scum will be quite thick and may have to be skimmed half way down. Add enough flour and water to make consistency of paste. To keep alive, add flour and water same as above and skim off as it works. For sour dough pancakes or biscuits add about a tablespoon of starter to your favorite batter for a batch to serve four. Experiment with the amount to find how much suits your taste.

## PEACH NUT BREAD

- 1 cup sliced canned cling peaches
- 2 1/2 cups sifted flour
- 2 teaspoons salt
- 2 teaspoons baking powder
- 1/2 teaspoon baking soda
- 3/4 cup brown sugar, firmly packed
- 1/4 cup shortening
- 3/4 cup chopped, roasted, unblanched almonds.
- 2 eggs
- 1/4 teaspoon almond flavoring
- 1 tablespoon chopped almonds for top

Drain peaches well, mash lightly, and beat with rotary beater until pulp is smooth. Sift together flour, salt, baking powder, soda and sugar. Cut in shortening until mixture resembles coarse meal. Add 3/4 cup almonds and mix well. Stir in well-beaten eggs, peaches and flavoring and mix only until flour is dampened. Pour into greased and floured loaf pan. Sprinkle top with almonds and bake in 350 degree oven for about an hour. Cut in very thin slices. This is delicious with a thin spread of cream cheese.

## ARMENIAN BREAD

1 package hot-roll mix

1 egg.

Salad oil

Sprinkle yeast from package of roll-mix over 3/4 cup warm water in large bowl; stir to dissolve. Combine egg and 1 1/2 tablespoons oil. Add to yeast mixture along with hot roll-mix and stir to mix well. Cover bowl with towel. Let rise in warm place, free from drafts, for 45 minutes.

Preheat oven to 400 degrees. Lightly grease cookie sheet. Punch down dough. On lightly floured surface, with lightly floured hands, roll into a 12" rope. Cut into 12 pieces. Roll each piece into an 8" circle. Place one circle on cookie sheet. Brush each circle very lightly with oil. Bake one at a time on lowest rack of oven for three minutes, or until bubbly and lightly browned. Turn and bake 3 minutes. You must watch these closely so that they will not burn. Cool on wire rack. Makes 12.

## BUTTERSCOTCH LOAF

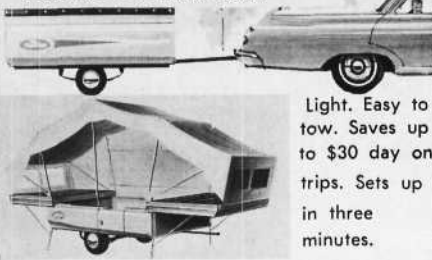
Spread on bottom and sides of a loaf pan 1/4 cup butter. Mix 1 cup brown sugar with 1/2 teaspoon cinnamon and pat into buttered sides of pan. Spread 1/2 cup pecan meats on pan bottom. Take a loaf of sliced bread and spread slices with 1/2 cup butter. Reassemble, place in pan with rounded-side down. Bake in hot oven for 10 minutes.

## SOUTHERN SPOON BREAD

Cook in double boiler until thick 3/4 cup white corn-meal and 2 cups milk. Cool. Add 1 tablespoon sugar, 2 tablespoons butter, 1 teaspoon salt, and 4 beaten egg yolks. Fold in 4 beaten egg whites. Bake in casserole in pan of water at 350 degrees for 45 minutes. Serve with melted butter and warm honey. Or, with honey butter made by heating together 1/3 cup butter and 2/3 cup honey over hot water.



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- 1 egg, beaten
- 1 cake yeast

3 1/2 cups sifted flour

Place butter, salt and sugar in a bowl. Pour boiling water over this, stir briefly. Let stand until lukewarm. Add beaten eggs, crumble in yeast. Beat with rotary beater to dissolve. Add flour at once, and beat with a spoon until dough is smooth. Cover with a damp cloth and let rise 1 hour in warm place, until light.

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## LETTERS FROM OUR READERS

### Didn't Like March Issue . . .

To the Editor: Suffering chuckawallas, what have you done to DESERT? If I want a movie magazine, I'll subscribe to one. If I want a real-estate brochure, I'll apply to the C. of C. If I want a recreation guide, I'll buy one. As for the March cover, it looks like an aborigine petroglyph of a pair of tenderfeet overdone by the sun. I subscribed to a desert magazine!

S. M. BUCKWALTER,  
Rialto, California

Comment from the Editor: Perhaps you overlooked the articles about scientists at work at the desert preserve, the cotton industry of Coachella Valley, a geological study via the Tramway, historical material recently uncovered by Lowell Bean and William Mason in regard to the desert's earliest inhabitants, the story of the desert's cultivation of the date, the trip of the month to a desert spring and book reviews of new Southwest books. C.P.

### We Were Wrong . . .

To the Editor: Although the historian Bancroft put Anza and Garces through San Geronio, modern historians during the past 30 years have traced their 1774 routes via the Anza Desert, Coyote Canyon and Hemet Valley, thanks to the painstaking research of Dr. Herbert Eugene Bolton. Garces accompanied Anza, Font and Co. on the first trip. He detached on the second one and ascended the Colorado River to near the Grand Canyon, returned to the Mohave villages and then crossed the Mohave Desert Trail.

Some time ago I researched Pauline Weaver, the first white occupant of San Geronio, who had his adobe in today's Cherry Valley. Weaver, with an Indian wife, broke through his private road up Morongo and east through Twentynine Palms to about the present location of Parker Dam. He did not own land in the pass. He and Isaac Williams applied to the governor for the ex-mission San Geronio Rancho, but the U.S. moved in before the grant was made.

L. BURR BELDEN,  
San Bernardino, California

### Comment from the Editor:

Mr. Belden is absolutely right. Of the readers who called this to our attention, Mr. Belden, well-known historian-writer himself, was the only one who astutely recognized Royce Rollins' misleading source of information.

Comparatively little has been published about Coachella Valley's early history. To compile her thumbnail guide, Mrs. Rollins consulted those books contained in DESERT's private library—one of the finest collections of Southwest books in existence. Many of these volume are now out of print. Unfortunately, the material used for the San Geronio Pass sketch was from an outmoded volume with material adapted from the erroneous early Bancroft history referred to by Mr. Belden. C.P.

## Historical Thumbnail Guide . . .



To the Editor: This photo seems to show that the mythological evil spirit of the Ca-huilla Indians at Tahquitz Canyon is not a myth, but abides in the falls. In the photo you will see to the left of center the eyes, nose and mouth of one of the spirits, with a white band around his forehead. In the upper left corner the face could be that of a cannibal and in the upper right corner is the head of a bear. As you study the photo you will find more faces. Perhaps these are what the Indians saw.

H. D. HATFIELD,  
Torrance, California

### Liked March Issue . . .

To the Editor: The obvious quality of the March issue is balance, the discriminating selectivity between the only two realities existing on the desert that are of any significance: the genuinely primitive and the truly sophisticated. Our modern desert is a unique balance between these two extremes. To this extent I agree with Mr. Randall Henderson—"there are two deserts." My congratulations to you for a superb issue. You've provided the degree of maturity long deserved by the Southland's deserts and placed a hopeful brand of new journalism before the public's jaded eyes.

MAJOR VIC STOYANOW,  
USMC (Ret.)  
La Jolla, California

To the Editor: Congratulations on an excellent issue in March. This is one of the finest issues you have produced and is a tremendous improvement over what the magazine was prior to your leadership. Keep up the good work!

W. B. KOHLMOOS,  
Communications Director,  
Kennecott Copper Corporation

To the Editor: I do not usually have time to write to anyone, but must say that both my wife and I think the March issue the finest ever published. We enjoyed the advertisements, too. There were articles for everyone—you'd normally have to buy five magazines specializing in various fields to get so much information.

E. H. W. JENKINS,  
San Diego, California

### Liked March Issue . . .

To the Editor: I have been a DESERT subscriber for many years. The March issue is the most interesting number I have ever read.

FLORENCE YOUNG,  
Butte, Montana





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